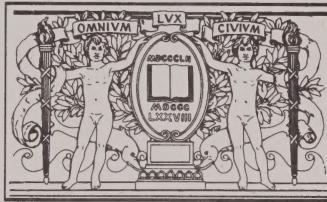


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Hotel Development Study

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May 17, 1989

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HOTEL DEVELOPMENT STUDY

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HOTEL DEVELOPMENT STUDY

EXECUTIVE SUMMARY

A surge of development of hotels and convention facilities in the last decade coincided with an increasing flow of visitors to Boston. In the next decade, visitors will be a growing source of jobs and income in the local economy and will support more development of lodging and meeting spaces.

The hotel and convention industries were on the verge of unprecedented expansion in Boston in 1978 when the Boston Redevelopment Authority last prepared a major study on market conditions, future demand for hotel and convention facilities, future development, and economic impact. This new study finds that the stock of hotel rooms grew by 4,919 rooms between 1978 and 1988, or 60 percent. Of the current supply of 11,792 hotel rooms, 42 percent were added since 1978.

The flow of new hotel construction eased after 1987, but Boston has much potential for hotel development in the 1990s due to the rising demand for accommodations from business visitors, groups, and tourists. National and regional economic trends set the stage for heightened demand for hotel rooms in Boston from all three market segments over the next twelve years.

Individual business visitors accounted for 47 percent of hotel room nights in Boston in 1987. Over the last ten years, the number of hotel room nights booked by individual business visitors to the city has outpaced the growth of Boston workplace employment, and should continue to increase as the local economy expands through the end of the century.

Group visitors from corporations and associations booked 33 percent of the hotel room nights in Boston in 1987. In the last ten years, the renovation of the Hynes Convention Center and two new facilities, the Bayside Expo Center and the World Trade Center, brought hundreds of thousands of square feet of new meeting and exhibit space

to the city. Group visitors, barely deterred by the closing of the Hynes between 1983 and 1988, came in ever growing numbers and should intensify that trend in the early 1990s with convention facilities now at a capacity commensurate with the city's regional and national economic presence.

In addition, tourist visitors have come to the city in ever increasing numbers due to large gains in regional personal income and improvements in Boston's amenities. Tourists typically account for 20 percent of the annual room nights in the city. Projections of personal income growth in New England and the Mid-Atlantic states, the source of the majority of Boston's tourist visitors, indicate that the city will experience continued growth in tourism in the years ahead.

The three market segments--individual business, tourist, and group--together are likely to generate demand for 5,600 additional hotel rooms by the end of the century. This projection assumes a 70 percent occupancy rate, considered a healthy norm in the hotel industry. If the current annual occupancy rate, around 73 percent, were to become the norm for the end of the century, the Boston market could satisfy demand with 4,900 additional rooms by the year 2000. Even if national and regional economic projections turned out to be too high and hotel demand in 2000 were, say, 20 percent lower than expected, the market would be able to support 3,900 additional hotel rooms at 73 percent occupancy. That would mean ten hotels about as large as the Marriott Long Wharf. If the national and regional projections used in this report prove to be accurate and 70 percent occupancy were the norm, Boston would need seven hotels the size of the 800-room Westin Hotel to satisfy demand.

Boston's current hotel market punctuates this projection. The city's hotels have exceptionally high average occupancy rates and average daily room rates. Among the nation's large cities, only New York has had such a tight hotel market in recent years. In 1988, Boston's average occupancy rate, 74.8 percent, ranked first among

large cities, and its average daily room rate, \$112, was second only to New York. National averages for occupancy and room rates in 1988 were 65.7 percent and \$67.

Will developers once again seize the hotel development opportunities? Developers must compete with other benefit-producing land uses for suitable development sites. As of the end of 1988, future development proposals appeared to fall short of the substantial development potential suggested by the market trends. In particular, unmet demand looms large in the mid-level and budget accommodation market segments.

If demand were not fully satisfied in the future, visitors would either seek accommodation in Cambridge and other locations in the Boston area, or seek other destinations. In either case, the city's economy would lose some of the substantial income that visitors generate.

The economic impact of visitor-based industries suggests that hotel and convention facilities play a large role in Boston's services-oriented economy. Visitors to the city spent \$1.8 billion in 1987. That generated a total economic impact of \$3.5 billion in Massachusetts. In fiscal year 1989, hotels will account for \$24.4 million or 4.4 percent of total local tax revenues in Boston. Hotels in the city employ 12,000 workers, twice the level of a decade ago. In addition, Boston hotels will generate \$17 million in lodging tax revenue for the state in fiscal year 1989. Insufficient accommodations in the city would lessen the growth of jobs and income in Boston and in the state.

II. HOTELS IN BOSTON PRIOR TO 1978

Adequate hotel and convention facilities are vital to the prosperity of large urban areas, while a thriving economy provides investment opportunities in hotel and convention development. Boston's employment growth in a wide range of services after the national recessions of the mid-1970s coincided with an unprecedented growth in the stock of hotel and convention facilities. This study describes that growth and examines current market conditions, future demand for hotel rooms, future development, and the economic impact of the hotel and convention industries. First, though, a brief look back at the hotel market before this decade provides a context for the following sections of this study.

In anticipation of the expansion of the John B. Hynes Memorial Convention Center and the doubling of Boston's hotel room stock, the BRA in 1977-79 conducted comprehensive studies of the city's hotel and convention industry. As chronicled in the BRA 1978 hotel report, "Hotel and Convention Center Demand and Supply in Boston - Past, Present and Future", Boston's hotel history spans a century and a half. The building of the Tremont House in 1829, the national pioneer in luxury hotel accommodations, exemplified Boston's early pre-eminence in the hotel industry. At the beginning of the twentieth century, Boston had a strong economy based on trade and manufacturing that supported nearly 100 hotels. By 1930, the city had 11,863 hotel rooms, about the same as the stock in 1988. As recounted in the 1978 report:

"During the next 30 years, (1930-1960), of economic stagnation and the erosion of the manufacturing base of the city's economy, no new hotels were constructed (in downtown Boston)... Between 1930 and 1953, there was a net decrease of 5,570 centrally located hotel rooms. As the structure of the national economy changed toward the development of service industries in the 1950s, Boston's economic base of financial, insurance, medical and educational services took on new life... with the revitalization of the Boston economy, the construction of new office space surged upward and employment rose... the demand for hotel rooms increased and the construction of new hotels began."

As older hotels closed between 1930 and 1960 due to economic hardship and obsolescence, a net loss of hotel rooms occurred which by 1978 brought the total supply of rooms in Boston to 5,994, approximately half the number of rooms operating in 1930, at the onset of the Great Depression.

This 30-year period of decline was followed by a rebuilding of the Boston hotel stock, beginning about 1960. During the 1960s, 2,325 rooms were constructed, 1,613 were added in the 1970s, and the stock increased by 4,919 rooms from 1980-1988. The latter represents 42 percent of the current supply. See Table II-1 through II-3 and Figure 1.

Table II-1: Hotel Rooms Constructed in Boston by Period,
1883 to 1987

	Number of <u>Rooms</u>
1883 - 1926	5,285
1927 - 1929	3,100
1930 - 1952	0
1953 - 1959	167
1960 - 1978	3,938
1979 - 1982	1,298
1983 - 1985	3,048
1986 - 1987	573
Total Constructed	17,409
Lost to Demolition and Remodeling	5,617
Net in 1987	11,792

Note: These data may reflect revisions of previous
figures released by the B.R.A. Research Department.
Includes neighborhoods within Boston city limits.

Sources: Hotel and Convention Center Demand and Supply in
Boston, March 1979, B.R.A. Research Department;
Boston Inspectional Services Department/Landmarks;
B.R.A. Research Department.

Table II-2: Hotel Rooms in Boston*, 1930 to 1987

<u>Year</u>	<u>Total Rooms</u>	<u>No. of Hotels</u>	<u>Decennial Number</u>	<u>Change Percent</u>
1930	11,863	49	**	**
1940	11,402	50	- 461	- 3.9%
1950	9,696	45	-1,706	-15.0%
1960	6,923	29	-2,773	-28.6%
1970	7,373	25	+ 450	+ 6.5%
1987	11,792	35	+6,419	+59.9%

Note: These data may reflect revisions of previous figures released by the B.R.A. Research Department.

Sources: Hotel and Convention Center Demand and Supply in Boston, March 1979, Table II-2 & Appendix III, B.R.A. Research Department; Connecticut/Massachusetts/Rhode Island Tour Book, 1986, American Automobile Association; Boston Inspectional Services Department/Landmarks; B.R.A. Research Department.

* Includes Logan Airport and neighborhoods within Boston city limits.

** Complete data are not available for prior years.

Table II-3: Hotel Rooms Built in Boston, 1883 to 1987, and Net Rooms Available in 1987

Period of Construction	Name of Hotel	Rooms	Rooms Available
		Constructed	in 1987
1883 to 1929	Hilner Hotel	145	70
	Copley Square Hotel	300	160
	Touraine	280	0
	Westminster	250	0
	Bellevue	350	0
	Essex	400	0
	Lenox Hotel	220	220
	Colonial/Gardner	75	0
	Canterbury	135	0
	Puritan	200	0
	Buckminster	250	0
	Fritz-Carlton	150	0
	Hemingway Chambers	220	0
	Diplomat/Chandler Inn	50	56
	Copley Plaza Hotel	450	400
	Huntington	60	0
	Graylyn/Guild House	150	0
	Kenmore	400	0
	Braemore	225	0
	Avery	140	0
	Argonne	220	0
	Fensgate	150	0
	Lincolnshire	150	0
	Sheraton	220	0
	Broadway/Metropolitan	120	0
	Eliot Hotel	100	93
	Madison	500	0
	Elks Hotel/Quality Inn	350	288
	Boston Park Plaza Hotel & Towers	1,300	977
	Omni-Parker House	600	560
	Ritz-Carlton Hotel	300	279
	Subtotal	8,460	3,083
1930 to 1952	No Hotel Construction		
1953 to 1959	Terrace Motor Lodge	73	73
	Fenway-Boylston/Howard Johnsons-Fenway	94	94
	Subtotal	167	167
1960 to 1978	Logan Airport Hilton	330	542
	Midtown Hotel	161	160
	Howard Johnsons Kenmore Square	178	179
	Sheraton Hotel Boston	1,000	1,265
	Charles River Hotel	56	56
	Howard Johnsons Southeast	100	100
	Ramada Inn-Brighton	118	113
	Inn At Children's	82	160
	Holiday Inn	300	301

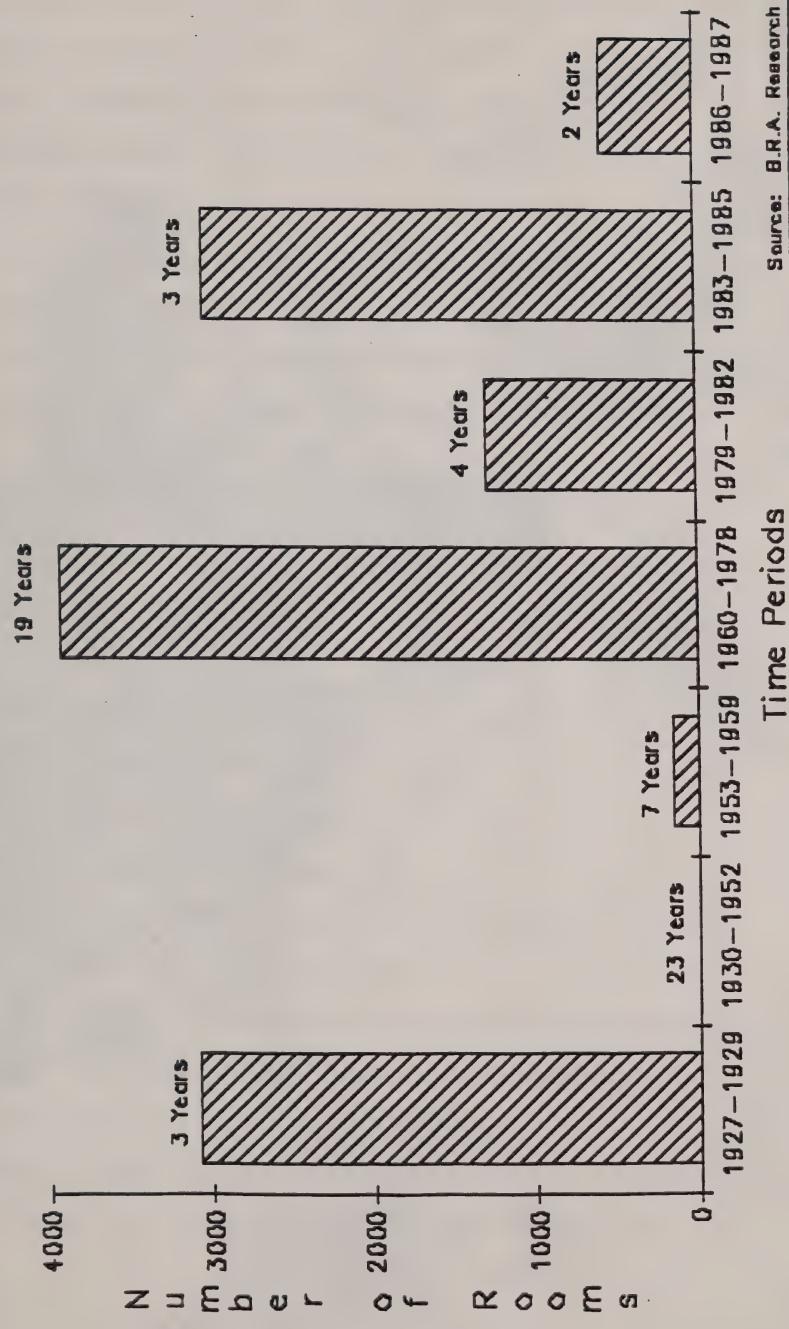
Table II-3. Continued.

<u>Period of Construction</u>	<u>Name of Hotel</u>	<u>Rooms Constructed</u>	<u>Rooms Available in 1987</u>
	Colonnade Hotel	306	294
	Ramada Inn-Logan Airport	209	240
	57 Park Plaza-Howard Johnsons	400	353
	Addition to Logan Airport Hilton	270	a
	Addition to Sheraton Hotel	<u>428</u>	<u>9</u>
	Subtotal	3,938	3,763
1979 to 1982	Addition to Ritz-Carlton	80	a
	Hotel Meridien	330	330
	Bostonian Hotel	153	153
	Back Bay Hilton	335	335
	Marriot Hotel Long Wharf	<u>400</u>	<u>400</u>
	Subtotal	1,298	1,218
1983 to 1985	Westin Hotel	804	804
	Marriot Hotel Copley Place	1,145	1,145
	Four Seasons Hotel	289	289
	Embassy Suites Hotel	310	310
	Lafayette Swiss Hotel	<u>500</u>	<u>500</u>
	Subtotal	3,048	3,048
1986 to 1987	Suisse Chalet Lodge	283	283
	Addition to Inn At Children's	60	a
	Boston Harbor Hotel	<u>230</u>	<u>230</u>
	Subtotal	573	513
Total		17,484	11,792

a Additional rooms have been counted in the respective hotel's "Rooms Available in 1987" column.

Sources: Hotel and Convention Center Demand and Supply in Boston, March 1979,
B.R.A. Research Department; Connecticut/Massachusetts/Rhode Island Tour Book,
1986, American Automobile Association; Boston Inspectional Services Department/Landmarks; B.R.A. Research Department.

Figure 1: Hotel Construction in Boston, 1927-1987



BOSTON HOTEL SUBMARKET AREAS

- 1) Back Bay/Park Plaza
- 2) Financial District
- 3) Waterfront/Fan Pier
- 4) Government Center/North Station
- 5) Logan Airport
- 6) Outlying



III. CURRENT STOCK OF HOTEL ROOMS

The hotel stock in the City of Boston amounted to 11,792 rooms in mid-1988. Since 1978, Boston's hotel stock has grown by 60 percent, and has become more modern, more geographically widespread and more concentrated in the luxury and first class categories. These characteristics are described in detail in this section.

For this analysis, hotel rooms are placed in class and market area categories. Hotel class may be determined by the average daily room rate charged by the hotel, the amenities offered by the hotel and location, and general condition and upkeep of the premises. The class categories and their approximate rate ranges, consistent with local industry standards in 1987, are as follows: luxury, \$150 and above; first class, \$100 to \$149; mid-level, \$75 to \$99; and budget, under \$75.

The total market area considered in depth by this study is the City of Boston as defined by the boundaries of its 16 neighborhoods. The Boston market consists of six submarkets:

- 1) the Back Bay/Park Plaza,
- 2) Financial District,
- 3) Waterfront/Fan Pier,
- 4) Government Center/North Station,
- 5) Logan Airport and
- 6) Outlying, including all areas outside of the bounds of the five areas above, but within the city limits.

For the approximate boundaries of the six market areas see the map, below. For a compilation of the Boston hotels and their respective class categories and market areas, see Appendix, Table A-1.

The number of hotel rooms in Boston has grown dramatically over the past ten years. From 25 hotels with 7,373 rooms in 1978, Boston's market has expanded to 35

hotels representing 11,792 rooms. Since 1978, the construction of 11 hotels and two additions have added 4,919 rooms, far outnumbering the loss of 350 rooms for the period.

The hotel market expansion began between 1979 and 1982 with the construction of four new hotels--the Hotel Meridien, Bostonian, Marriott Long Wharf, and Back Bay Hilton--plus an addition to the Ritz-Carlton. These projects added 1,298 rooms to the total hotel stock. All of these hotels are currently operating in the luxury or first class category. Between 1983 and 1985, the construction of five new hotels--the Westin Hotel, Marriott Copley Place, Four Seasons, Lafayette and Embassy Suites Hotel--brought 3,048 rooms into the luxury and first class categories. No hotel rooms currently operating in the mid-level or budget range were built during that period.

From 1986 through mid-1988, two new hotels and one addition have been developed: the Susse Chalet, the Boston Harbor Hotel and an addition to the Inn at Children's Hospital. These added 283 budget class, 60 mid-Level and 230 luxury rooms to the stock, or a total of 573.

During the first quarter of 1988, the renovated Bradford Hotel reopened as a 288-room Quality Inn. The remodelling resulted in a net loss of 34 rooms, yet the Quality Inn maintains the mid-level status of the former Bradford.

No hotels were completed in 1988 and none were currently under construction as of May 1989. Hotel development projects expected after 1988 are discussed in section VII.

The 4,919 hotel rooms built since 1978 represent over 40 percent of the total current stock. Of this number 1,082 rooms or 22 percent were in the luxury category, 3,494 rooms or 71 percent in the first class category; 343 rooms or 7 percent were mid-level; and no rooms were constructed in the budget category. In comparison,

the eighteen-year period 1960-1978, of the 3,938 rooms constructed, 13 percent were in the budget category, 43 percent were mid-level, and 44 percent were first class and luxury rooms.

This shift in construction from 56 percent in the two lower classes to merely 7 percent reflects changes in the hotel market in Boston. Since 1977, four luxury hotels have joined the Ritz-Carlton to meet demand on the high end of the hotel market. The emphasis on luxury accommodations relate to a number of factors. Boston has become and looks more prosperous with the emergence of a thriving business district and its new office towers and retail complexes and extensive rehabilitation of commercial buildings. The city's workforce has shifted toward professional, managerial, and technical occupations with high wages relative to the region. In addition, Boston has heightened its image as a cosmopolitan service-oriented city with historic and cultural attractions. The city's resurgence over the past ten years has elevated its status from a middle-tier hotel city, with a 1978 average daily room rate only \$1.50 over the national average, to a top-tier city where the market commands one of the highest average room rates in the country--\$30 over the national average in 1986. Since 1978, luxury and first class national hotel chains, which previously bypassed Boston, entered the local market.

From the viewpoint of a potential developer of budget or mid-level hotels, the costs of land acquisition and development, especially in center city locations, are extremely high. The level of market demand for low- and moderately-priced rooms diminishes as a factor when developers cannot get sufficient returns on new budget hotels. The majority of existing budget and mid-level hotels in Boston are older structures, built or acquired before the tremendous appreciation in real property costs during the last decade. As long as strong demand for high-priced hotel rooms

continues, prospective developers will favor additional luxury and first class hotels.

Hotel development in the last ten years has pushed Boston's total hotel room stock toward concentration in the luxury and first class categories. Where luxury/first class rooms made up 57 percent of all Boston hotel rooms in 1977, they now comprise 70 percent; mid-level and budget rooms made up 43 percent of the s in 1977, compared to 30 percent today. See Tables III-1, III-2, and Figures 2 and 3.

Boston's concentration of hotel rooms in the top classes is reflected in its relatively high room rates. Boston has registered the second highest average daily room rate in the country, behind only New York, for the past three years.

Boston's hotel stock has become more modern, with over 40 percent being constructed since 1980. The average size of a hotel in the city has increased to 337 rooms from 295 in 1978 and 242 in 1930.

Since 1978 three new convention hotels--the Westin and Marriott at Copley Plaza and the Hilton--were built in the Back Bay in the vicinity of the expanded Hynes Auditorium, adding to the existing two convention hotels, the Sheraton and Park Plaza. These hotels added 2,321 rooms to the stock of 1,618 convention hotel rooms supplied by the Sheraton and Park Plaza. The Marriott and Westin joined the Sheraton and Park Plaza in having meeting rooms and hotel rooms sufficient to host small- to medium-sized conventions completely within their own buildings. This capability was a major reason convention business did not drop when the Hynes was closed for renovation.

While growth in the Boston hotel stock in the last ten years has occurred mainly in the Back Bay within walking distance of the Hynes Convention Center, hotel development has emerged in burgeoning office and residential development areas. For such areas are the expanded Financial District, where the developers created the

Table III-1: Current* Hotel Stock in Boston by Class and Market Area.

	No. of		No. of		No. of		No. of	
	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms
Back Bay/ Park Sq.	2	568	7	5,220	3	861	3	413
Financial	2	483	2	1,040	0	0	0	0
Waterfront/ Fan Pier	1	230	1	400	0	0	0	0
Gov't Ctr./ North Stn.	0	0	0	0	1	301	0	0
Airport	0	0	0	0	2	782	0	0
Outlying	0	0	1	310	3	452	7	732
Totals:	5	1,281	11	6,970	9	2,396	10	1,145

Sources: B.R.A. Research Department 1987 Hotel & Convention Center Survey.

* As of December 1988.

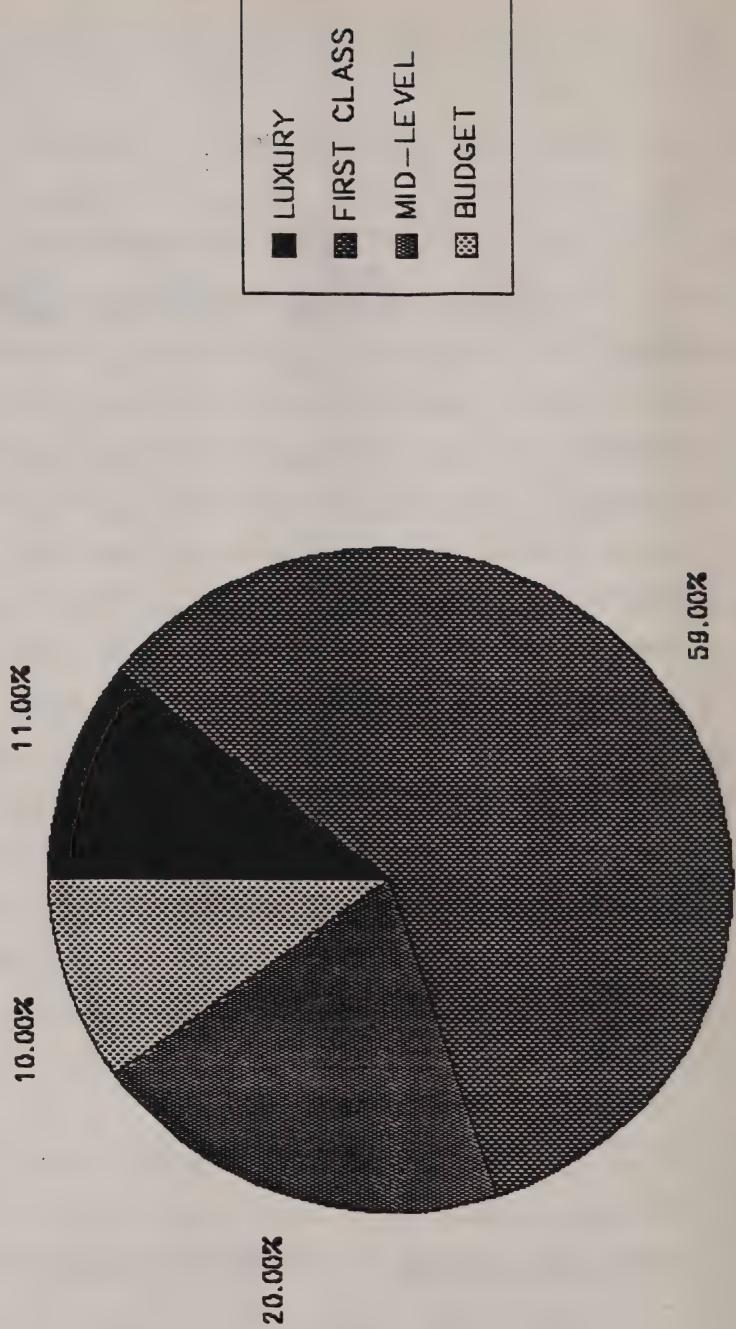
Table III-2. Current* Hotel Stock in Boston
by Market Area.

	Hotels	Rooms
Back Bay/ Park Sq.	15	7,062
Financial	4	1,523
Waterfront/ Fan Pier	2	630
Gov't Ctr./ North Stn.	1	301
Airport	2	782
Outlying	11	1,494
Total	35	11,792

Sources: B.R.A. Research Department 1987 Hotel & Convention Center Survey.

* As of December 1988.

Figure 2: Boston Hotel Rooms by Class, 1987

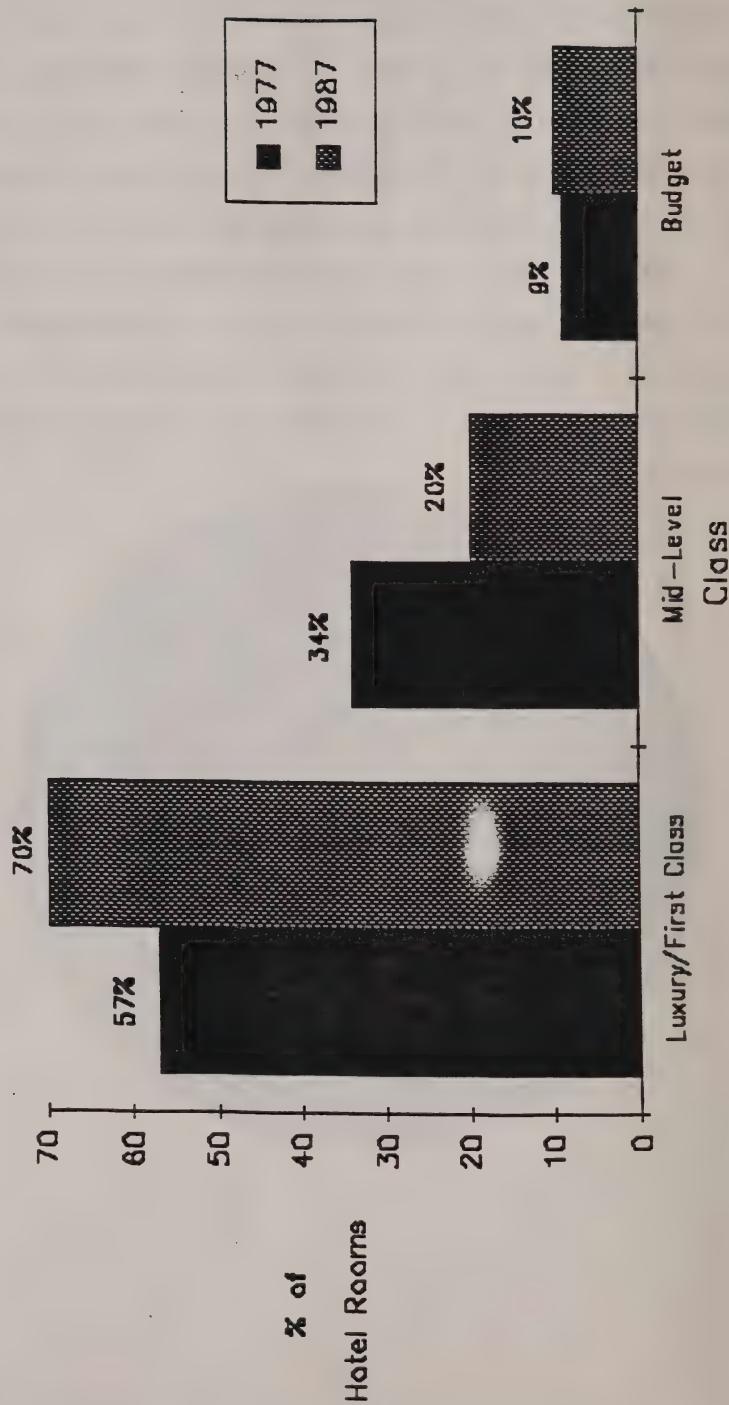


Source: B.R.A. Research

Meridien/One Post Office Square, a combined office and hotel tower; the Midtown Cultural District with the Lafayette in a mixed-use development; the Waterfront, once industrial and decaying, where the Marriott Long Wharf and the Boston Harbor Hotel were constructed; and the Charles River where the Embassy Suites (now operating as the Guest Quarters Suite Hotel) and several new Cambridge hotels are located.

The recent trend of hotel development outside of the Back Bay indicates strength in the hotel and real estate markets in each of the four locations. Future hotel development in Boston likely will continue to expand beyond the proximity of the Hynes Auditorium as long as the existing core of hotels can accommodate the convention visitors.

Figure 3: Comparison of Boston Hotel Rooms by Class, 1977 and 1987



Source: B.R.A. Research

IV. BOSTON IN THE NATIONAL PERSPECTIVE

In the national context, the Boston area has a relatively small stock of hotel rooms, but high demand for accommodations. Boston currently has fewer hotel rooms than cities of comparable population and employment. Among 21 of the nation's largest metropolitan areas, Boston ranked 17th in hotel rooms per 1,000 population in 1986. Although the Boston area had the 5th largest employment base in 1986, it had less than 10 hotel rooms per 1,000 employment, ranking 18th. See Table IV-1.

Boston's convention facilities were used at an average intensity in 1986, but its total exhibition space and total convention delegates ranked toward the lower third of 25 large cities. See Table IV-2. The major expansion of the Hynes Auditorium will boost Boston's delegate attendance and improve the city's ranking.

From the perspective of hoteliers, Boston is one of the best hotel markets in the nation. In comparison to other large cities in the U.S. in 1988, Boston's hotel market ranked first in average occupancy and second to New York in average daily room rate. See Tables IV-3 and IV-4. Among 21 of the largest metropolitan areas, Boston, with 74.8 percent occupancy, joined New York, San Diego, San Francisco, and Detroit as the only areas with hotel occupancy rates above 73 percent. Denver, Dallas, and Houston had occupancy rates around 55 percent, and the national average was 65.7 percent. Boston's average daily room rate for 1988, \$112.29, topped San Francisco's average rate by \$9, but was \$6 less than New York's average. The 18 other metropolitan areas had average daily room rates ranging from \$51 (Denver and Houston) to \$92 (Washington, D.C.). The national average daily room rate in 1988 was \$66.62.

The hotel stock in Boston is heavily weighted toward the higher rate categories. Merely 19 percent of the area's hotel rooms had rates less than \$60 in 1985. All of 21 other selected large metropolitan areas had larger shares of their respective hotel stocks in rate categories under \$60. See Table IV-5 and section VI for detail.

Table IV-1. Metropolitan Area Population, Employment and Hotel Rooms,
Selected Areas, 1986.

Metropolitan Area	(1)	(2)	(3)	Hotel Rooms Per 1,000 Population	Rank Among Selected Metro Area	Hotel Rooms Per 1,000 Employment	Rank Among Selected Metro Areas
	Population	Employment	Hotel Rooms	Population	Metro Area	Employment	Metro Areas
Atlanta	2,380,000	1,417,400	43,533	18.3	4	30.7	4
Baltimore	2,244,700	1,201,800	10,395	4.6	19	8.6	20
Boston	3,695,400	2,302,100	22,804	6.2	17	9.9	18
Chicago	6,128,300	3,244,300	61,704	10.1	13	19.0	14
Cincinnati	1,408,100	708,200	14,104	10.0	14	19.9	13
Dallas	2,203,700	1,465,700	40,118	18.2	5	27.4	8
Denver	1,582,500	988,700	23,202	14.7	9	23.5	10
Detroit	4,315,800	1,906,200	20,335	4.7	18	10.7	17
Kansas City	1,475,700	822,700	17,168	11.6	11	20.9	12
Los Angeles	7,901,200	4,458,100	27,981	3.5	21	5.3	21
Nashville	890,000	506,700	18,238	20.5	2	38.0	2
New Orleans	1,318,800	649,700	25,704	19.5	3	39.6	1
New York	8,375,900	4,496,300	50,998	7.3	16	13.6	16
Philadelphia	4,768,400	2,328,900	21,610	4.5	20	9.3	19
Phoenix	1,714,800	916,100	27,812	18.2	6	30.4	5
St. Louis	2,398,400	1,271,500	NA	--	--	--	--
San Antonio	1,188,500	593,100	18,783	14.1	10	28.3	7
San Diego	2,063,900	1,071,500	31,638	15.3	8	29.5	6
San Francisco	1,541,900	1,117,700	36,480	23.7	1	32.6	3
Seattle	1,692,000	977,100	15,841	9.4	15	16.2	15
Washington	3,429,000	2,194,800	54,337	15.8	7	24.8	9
Cleveland	1,867,000	973,500	NA	--	--	--	--
Houston	3,164,200	1,736,300	36,455	11.5	12	21.0	11

Source: (1) and (2): U.S. Department of Commerce, Bureau of Economic Analysis.

(3) "The Top Convention Cities," Business Travel News, August 27, 1987.

Table IV-2. Convention Facilities and Delegates, Selected Metropolitan Areas, 1986.

Metropolitan Area	Primary Convention Center	Exhibition Square Feet	Number of Convention Delegates		Delegates per Sq.Ft. Exhibit	Rank Among Selected Metro Areas
			1985	1986		
			----	----		
Atlanta	Georgia World CC	640,000	1,500,000	1,575,000	2.46	9
Boston	Bynes Memorial Convention Center *	200,000	400,000	440,000	2.20	10
Chicago	McCormick Place	1,600,000	2,079,900	2,030,000	1.27	19
Cincinnati	Dr. Albert Sabin Convention Center	151,000	260,000	270,000	1.68	15
Dallas	Dallas Convention Center	600,000	2,002,000	1,967,000	3.28	6
Denver	Currisen Hall	100,800	487,946	507,463	5.03	3
Detroit		400,000	508,032	531,991	1.33	18
Hartford	Hartford Civic Center	90,000	174,000	195,000	2.17	13
Kansas City	H. Roe Bartle Hall	300,300	NA	380,000	1.27	19
Las Vegas	Las Vegas Convention Center	1,100,000	1,519,421	1,519,421	1.38	17
Los Angeles	Los Angeles Convention Center	355,000	725,000	965,031	2.72	8
Montreal	Montreal Convention Center	180,000	185,665	NA	1.03 a	21
Nashville	Nashville Convention Center	118,675	212,948	NA	1.79 a	14
New Orleans	New Orleans Convention Center	381,000	770,000	830,000	2.18	12
New York	Jacob Javits Convention Center	740,000	4,383,000	4,519,000	6.11	2
Oakland	Oakland Convention Center	48,000	61,500	70,500	1.47	16
Orlando	Orange County Convention/Civic Center	150,000	666,438	680,611	4.54	4
Philadelphia	Philadelphia Civic Center	382,000	383,702	385,000	0.98	22
Phoenix		223,000	468,000	488,000	2.19	11
St. Louis		240,000	729,221	792,100	3.30	5
San Antonio		241,000	238,185	227,850	0.95	23
San Diego		75,000	546,972	522,049	6.96	1
San Francisco	Moscone Center	285,500	NA	NA	--	--
Seattle	Washington State Convention and Trade	565,177	404,450	425,627	0.75	25
Washington	Washington Convention Center	381,000	NA	1,143,840	3.00	7
Houston	Brown Center	1,321,500	709,869	1,064,675	0.81	24

a/ 1985 ratio.

* Bynes expansion completed in 1986.

Source: "The Top Convention Cities," Business Travel News, August 24, 1987.

Table IV-3. Average Hotel Occupancy in Selected Metropolitan Areas, 1986-1988.

Metropolitan Area	Average Occupancy in Percent				Rank Among Selected Metro Areas
	1986	1987	1988	1988	
Boston	73.0	74.0	74.8	1	
Atlanta	63.0	61.0	62.0	15	
Chicago	69.1	68.4	68.9	11	
Cincinnati *	61.0	65.5	66.0	12	
Dallas	58.7	54.0	55.0	20	
Denver	55.7	54.0	54.0	21	
Minneapolis	64.0	60.9	60.0	16	
Kansas City	60.4	64.6	63.3	14	
Los Angeles	70.1	72.3	72.0	5	
Nashville	68.5	70.7	70.8	7	
New York	78.0	74.8	74.7	2	
Philadelphia	66.0	71.4	69.1	8	
Phoenix	68.7	58.2	58.7	17	
St. Louis	62.0	63.2	63.8	13	
San Diego	72.7	77.7	73.1	4	
San Francisco	72.3	75.4	74.1	3	
Seattle	66.0	69.4	71.1	6	
Tampa	68.0	68.0	69.0	9	
Washington	67.4	68.0	70.0	10	
Cleveland *	60.2	57.5	58.0	18	
Houston	44.0	51.6	55.4	19	

Table IV-4. Average Daily Room Rates in Hotels in Selected Metropolitan Areas, 1986-1988.

Metropolitan Area	Average Daily Room Rate (\$)				Rank Among Selected Metro Areas
	1986	1987	1988	1988	
Boston	91.00	99.70	112.29		
Atlanta	66.00	65.00	68.00		
Chicago	70.96	82.79	87.59		
Cincinnati *	54.21	56.00	52.00		
Dallas	59.25	58.49	59.12		
Denver	55.93	50.09	50.46		
Minneapolis	57.03	57.08	60.02		
Kansas City	55.26	49.81	52.21		
Los Angeles	68.28	70.43	72.07		
Nashville	58.74	63.50	68.71		
New York	101.25	112.75	118.86		
Philadelphia	73.90	71.35	76.48		
Phoenix	79.24	67.66	68.35		
St. Louis	55.00	58.96	59.82		
San Diego	72.94	74.71	77.22		
San Francisco	88.08	103.67	103.27		
Seattle	67.00	72.20	77.79		
Tampa	53.00	59.00	58.55		
Washington	85.00	85.59	94.00		
Cleveland *	50.84	52.00	52.00		
Houston	51.00	48.52	50.97		

Source: Pannell Kerr Forster, Special Supplement: Trends in the Hotel Industry, United States, February 1989.

* Data are actual for 1987, estimated for 1988; from 1988 annual issue.

Source: Pannell Kerr Forster, Special Supplement: Trends in the Hotel Industry, United States, February 1989.

* Data are actual for 1987, estimated for 1988; from 1988 annual issue.

Table IV-5. Rate Class of Hotel Rooms in Percent,
Selected Metropolitan Areas, 1985.

Metropolitan Area	Percent of Hotel Rooms in Room Rate Categories				
	\$0 to 29	\$30 to 44	\$45 to 59	\$60 to 85	\$86 and over
Atlanta	13	19	19	29	20
Baltimore	0	19	29	45	7
Boston	1	9	9	33	47
Chicago	4	9	17	44	28
Cincinnati	11	29	25	21	12
Dallas	6	20	19	23	31
Denver	5	13	21	28	35
Detroit	13	17	23	27	20
Las Vegas	14	25	25	28	10
Los Angeles	3	9	15	31	41
New Orleans	2	11	20	28	41
New York	0	9	18	14	60
Orlando	7	38	23	13	19
Philadelphia	5	15	23	35	22
St. Louis	10	25	28	35	4
San Antonio	5	35	25	13	23
San Diego	9	20	21	28	22
San Francisco	3	8	18	27	45
Tampa	8	32	28	23	9
Washington	1	13	14	24	48
Cleveland	18	21	30	23	8
Houston	3	21	23	28	27

Source: Lavellehol and Horwath, Annual Report on Hotel and
Motor Hotel Operations, 1985.

V. NATIONAL AND REGIONAL ECONOMIC TRENDS

Trends in the number of occupied hotel rooms in Boston, or in economic terminology, the changes in demand for hotel rooms, are closely related to trends in the national, regional, and local economies. Year to year changes in hotel occupancy reflect decisions of business to hold meetings and take business trips, of groups to hold conventions and seminars, and of consumers to travel. This study's attempt to forecast the performance of Boston's hotel industry relies heavily on national and regional economic trends and projections.

The national forecast used for this report is published by the U.S. Bureau of Labor Statistics. See "Monthly Labor Review," September 1987, Volume 110, Number 9. The regional and city projections are based on the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), "Metropolitan Area Projections of Income, Employment, and Population to the year 2000", 1985, and the reports of the Boston Redevelopment Authority Research Department. See the appendix for descriptions of these projection methods.

National

According to the moderate-growth alternative projections published by the BLS, the U.S. economy is generally characterized by a slowly improving federal deficit, a return to higher productivity growth, and a continuation of the shift to a more service-oriented economy.

The moderate-growth projection results for selected economic measures are as follows:

Table V-1. Growth Projections, United States, 1986-2000.

Item	Actual		Projected 2000		
	1972	1986	Low	Moderate	High
Civilian unemployment rate....	5.6	7.0	7.7	6.0	4.5
Federal deficit (billions of current dollars)..	-16.8	-204.0	-289.1	-89.3	-44.1
Net exports (billions of 1982 dollars)..	-48.8	-149.7	-39.1	-98.6	-150.2

Annual Growth Rate	Actual	Projected 2000		
		1972-86	Low	Moderate
Real GNP.....	2.5	1.6	2.4	3.0
GNP implicit deflator.....	6.6	2.3	3.4	4.9
Civilian labor force.....	2.2	1.0	1.2	1.3
Employment (from household survey	2.1	.9	1.2	1.5
Real disposable personal income	2.7	1.5	2.4	3.0
Real disposable per capita income	1.7	.7	1.6	1.9

Source: Norman C. Saunders, Economic Projections to
the Year 2000, Monthly Labor Review, September 1987.

As shown above, real GNP is projected to grow at a rate of 2.4 percent per year between 1986 and 2000. This is slightly below the 2.5 percent per year growth experienced over the 1972-1986 period. Employment is projected to grow by 21 million jobs, bringing total employment to over 133 million by 2000; virtually all of the net increase of 21 million jobs are in the service-producing industries. Unemployment is

also expected to decrease by one percentage point to 6.0 percent between 1986 and 2000.

The element of the national forecast that most directly reflects spending in the tourism industry is personal consumption expenditures, that is, money spent by consumers on personal goods and services. Growth in the Gross National Product (GNP) fuels growth in Real Disposable Personal Income (inflation-adjusted income after taxes) which in turn stimulates an increase in personal consumption expenditures. Projected growth in real disposable personal income is 2.4 percent per year, equal to the growth projected for the GNP.

Continuing an historic trend, growth in personal consumptions expenditures is projected to grow at a slightly higher rate than overall GNP, reflecting Americans' propensity to spend their earned income rather than placing it in savings accounts or other investments. This trend bodes well for the hospitality industry, as a substantial share of the growing income will be spent on discretionary items such as travel, recreation, and dining. Personal consumption expenditures on nondurables, including food and beverages, are projected to grow at 1.8 percent per year while such expenditures on services, including travel and hospitality, are expected to increase by 3.0 percent per year.

Regional

Though the national economy is expected to expand moderately in the next 10 to 15 years, the economy in the Boston region is expected to perform well above the national averages.

The projections of growth in Boston's hotel and convention industry were partly based on regional economic forecasts published by National Planning Association, (NPA), "Regional Economic Projections Series, 1985-2000", and the U.S. Bureau of

Economic Analysis, (BEA), "Metropolitan Area Projections of Income, Employment and Population to the year 2000", 1985.

According to the U.S. Bureau of Economic Analysis, personal income for the Boston metropolitan area would rise from 67.8 billion in 1987, 7th highest in the nation, to \$95 billion, or 6th highest, by the year 2000. BEA also projects Boston area per capita personal income to grow from \$6,693 in 1983 to \$8,918 (in current 1972 dollars) by the year 2000, ranking Boston 18th among the 330 largest metropolitan areas in the nation. The report also projects that population in the Boston area would grow at an average rate of 0.9 percent per year through the year 2000. According to the National Planning Association (NPA), employment in the Boston area would increase by 396,000 jobs between 1987 and the year 2000, or from 2,400,000 to 2,889,800. The NPA bases this projection on economic trends reflecting lower energy costs and a lower exchange value of the dollar. These trends would stimulate the older, large industrial centers in the Northeast, such as Boston, which went through major adjustments during the recessions of the 1970s.

Related analyses and projections for the City of Boston conducted by the Boston Redevelopment Authority forecast a growth of 150,000 jobs from 1985-2000, or about 10,000 per year. The new jobs will be created primarily in a broad range of services activities. Public and private development will amount to \$20 billion over the next ten years. Seven major public infrastructure projects will add thrust to the underlying growth trends. The Third Harbor Tunnel, the Boston Harbor clean-up, the Central Artery project, new waste-to-energy plant, and a new house of corrections are scheduled to be constructed during the next decade. These public projects will increase the current number of jobs in construction by 50 percent through the mid-1990s.

The regional economy's recent expansion has resulted in lower unemployment, higher income, greater population, and more business activity, including lodging.

The regional economic expansion has also precipitated higher housing costs, a higher cost of living, and shortages of labor for many jobs. These factors may constrain economic growth unless more workers are attracted to live in the Boston area.

VI. DEMAND FOR HOTEL ACCOMMODATIONS

Demand for hotel accommodations may be measured by room nights sold by hotels. Sales information indicate that demand for hotel accommodations in Boston has been rising steadily for the past ten years. From 1,771,865 total hotel room nights in 1977, sales reached 3,168,304 room nights in 1987, a 79 percent increase.

The relationship of room supply to room demand may be gauged by average occupancy rates and average daily room rates. If demand exceeds supply, the average occupancy and daily room rates tend to rise. As noted in section IV, Boston ranked second among the nation's largest cities, behind New York, in average occupancy rate and average daily room rate from 1985 through 1987. In 1986, Boston's occupancy rate was 72.5 percent, and the room rate \$90.79. The comparable national rates in 1986 were: 64.7 percent average occupancy and an average room rate of \$61.95. From 1977 to 1987, Boston's hotel market achieved an annual occupancy rate over 70 percent in seven of the ten years. See Table VI-1.

The average daily room rate in Boston rose dramatically from \$31.68 in 1977 to \$97.00 in 1987, a 206 percent increase, or a 65 percent increase in constant 1987 dollars. Boston has outpaced the growth in the national average daily room rate over the last ten years by about 30 percent.

Boston hotels have maintained high average occupancies despite seasonal variation in business and additions of approximately 3,000 rooms between 1983 and 1985. During Boston's winter months, December through February, hotels typically post 50 percent average occupancies. During the peak months of May, June, September and October occupancies reach 80 to 90 percent. The seasonality of Boston's demand has not changed significantly since 1980. See Table A-2.

Due to this pronounced seasonality, Boston hotels turn away business on peak days, but have not been able to raise annual average occupancy above 76 percent. If

the city had enough hotel rooms to accommodate every visitor during peak times, the occupancies in the off season would be much lower and the annual average would fall below 70 percent.

Wide variation in occupancy rates for a given hotel would result in inefficient operation with respect to staffing and purchasing supplies. The challenge for the Boston hotel industry is to develop enough hotel rooms to accommodate the four-month peak demand and ease pressure on room prices without leaving too many rooms unoccupied in the off season. The majority of industry executives who were interviewed in the BRA's hotel survey supported 70 percent as an acceptable and healthy average annual occupancy.

Boston's hotel room demand is generated primarily by visitors from the following three market segments: commercial individual, group association/group corporate and tourists. In 1977, the segmentation of the Boston hotel room market was 49 percent commercial individual, 31 percent group and 20 percent tourist visitors. In 1987, the market segmentation was 47 percent commercial individual, 33 percent group and 20 percent tourist. Growth in the group association/corporate segment has outpaced the growth, relatively speaking, in the other two segments. See Table VI-2.

Table VI-1. Annual Hotel Rooms, Occupancy, and Room Nights,
Boston, 1975-1986.

Year	Hotel Rooms	Occupancy Rate	Annual Hotel Room Nights
1975	6,227	64.1	1,456,900
1976	6,227	70.9	1,611,454
1977	6,925	70.1	1,771,865
1978	7,373	77.2	2,077,564
1979	7,200	77.6	2,039,328
1980	6,907	75.8	1,810,960
1981	7,317	72.4	1,833,590
1982	8,205	68.1	2,039,475
1983	9,009	68.1	2,239,322
1984	10,154	69.5	2,575,816
1985	11,253	68.9	2,829,961
1986	11,536	72.2	3,040,082
1987	11,792	73.4	3,159,195

Source: Hotel room count: Boston Redevelopment Authority;
Occupancy rate: Parnell, Kerr, Forster.
Hotel room nights were computed as: hotel rooms times
365 days times occupancy rate in decimal form.

Table VI-2. Hotel Room Nights by Market Segment,
Boston, 1976-1987.

Number of Annual Hotel Room Nights

Commercial				
Year	Individual	Tourist	Group	Total
1976	789,613	322,291	499,551	1,611,454
1977	866,214	354,373	549,278	1,771,865
1978	1,018,006	415,513	644,045	2,077,564
1979	999,271	407,866	632,192	2,039,328
1980	936,370	382,192	592,398	1,910,960
1981	947,459	386,718	599,413	1,933,590
1982	999,343	407,895	632,238	2,039,476
1983	1,074,875	447,884	716,583	2,239,322
1984	1,236,392	513,183	824,281	2,575,816
1985	1,330,082	565,992	933,887	2,829,961
1986	1,428,839	608,016	1,003,227	3,040,082
1987	1,484,822	631,839	1,042,534	3,159,195

Annual Hotel Room Nights by Market Segment
(in Percent)

Commercial				
Year	Individual	Tourist	Group	Total
1978	49	20	31	100
1987	47	20	33	100

Source: Boston Redevelopment Authority, Hotel
Study, 1978; Fennell, Kerr, Forster, 1987.

COMMERCIAL INDIVIDUALS

The commercial individual visitor, primarily made up of executives visiting for business purposes, has consistently accounted for about half of the total hotel room demand in Boston over the past ten years. As the number of city-wide employees has grown, so too has the commercial individual visitor demand.

In 1977, Boston's total employment was 516,400 and the number of hotel room nights booked by commercial individuals was 868,200; in 1987, employment was 620,338 and the number of hotel room nights numbered 1,552,500. While this segment of the market grew by 79 percent, the ratio of hotel room nights booked per employee increased from 1.62 in 1977, to 1.79 in 1982, and to 2.40 in 1987. See Table VI-3. This increase can be attributed to the shift in the city's employment mix away from manufacturing and wholesale trade and toward business and professional services which generate more hotel room nights per employee.

Based on BRA projections of growth in Boston city-wide employment, by 1990 the demand for hotel rooms generated by the commercial individual is expected to equal 1,566,100 annual hotel room nights. That would represent a 17 percent increase over sales in 1985. Commercial individuals would by themselves support a supply of 6,129 hotel rooms. By 1995 the demand would reach 1,962,500 hotel room nights and would require a supply of 7,681 hotel rooms. By the turn of the century, demand would grow to 2,089,100 hotel room nights and need a room supply of 8,176. See Table VI-4.

These projections of hotel room requirements are based upon an annual average occupancy rate of 70 percent and a constant seasonal pattern of demand for rooms by commercial individual visitors over the years.

Table VI-3. Employment and Hotel Room Nights,
Boston, 1976-1987.

Year	Total Market			Commercial Individual		
	Employment	Annual Hotel Room Nights	HRN per Employee	Annual Hotel Room Nights	HRN per Employee	
1976	510,899	1,611,454	3.15	789,613	1.55	
1977	516,400	1,771,865	3.43	868,214	1.68	
1978	526,862	2,077,564	3.94	1,018,006	1.93	
1979	546,062	2,039,328	3.73	999,271	1.83	
1980	560,973	1,910,960	3.41	936,370	1.67	
1981	561,700	1,933,590	3.44	947,459	1.69	
1982	558,014	2,039,476	3.65	999,343	1.79	
1983	568,100	2,239,322	3.93	1,097,258	1.89	
1984	590,708	2,575,816	4.36	1,262,150	2.09	
1985	592,003	2,829,961	4.78	1,386,681	2.25	
1986	606,305	3,040,082	5.01	1,489,640	2.36	
1987	620,338	3,159,195	5.09	1,548,005	2.39	
Average 1978-1987			4.00			1.99
Average 1978-1983			3.69			1.80
Average 1984-1987			4.81			2.27

Source: See Table VI-1.

Note: The BRA revised the Boston employment series in 1988, based on revisions by the Bureau of Economic Analysis. The revisions would not change this analysis.

Table VI-4. Projections of Number of Commercial Individual Hotel Room Nights, 1985 to 2000.

	Total Employees	Hotel Room Nights Per Employee	Number of Hotel Room Nights
1985	510,899	2.25	1,333,670
1990	560,973	2.39	1,561,564
1995	593,600	2.80	1,962,520
2000	652,400	2.80	2,089,080

Sources: Employment Projections: BRA report # 247;
Hotel Room Nights per Employee: computed, see Table P3,
for 1985, projected from 1987 value (2.4) for 1990 and
a nominal increment (to 2.8) for 1995 and 1990,
equivalent to the nominal increase between the
1978-1983 and 1983-1987 periods.

TOURIST VISITORS

Boston has many tourist attractions and conveys an image of a sophisticated, walkable city, well endowed in the arts, education, medicine, historic sites, commerce, and recreation. Boston is the business and intellectual center of New England, as noted in a recent article on New England in The Economist: "Wherever you look, something is being tried for the first time in Boston."

Tourism to Boston has risen dramatically over the last ten years. The number of tourist visitors to Boston has risen steadily from 4.8 million in 1977 to 6.0 million in 1987. Several Boston attractions have enjoyed rapid growth in the last ten years. For instance, an estimated 1.2 million people visited the New England Aquarium in 1987, compared to 0.8 million in 1977, a 50 percent increase. Attendance at the Museum of Science grew from 0.9 million in 1977 to 1.6 million in 1987, a 65 percent increase.

The sources of growth in tourism were national and regional prosperity, an increase in U.S. domestic travel due to terrorism abroad, lower gasoline prices, the depreciation of the dollar, and an increase in population over 50 years of age which is the peak travel population. Boston's growing popularity as a travel destination may be attributed also to increased marketing efforts and other positive national attention such as television exposure generated by "Cheers", "Spenser for Hire" and local professional sporting events.

Foreign visitors to Greater Boston typically make up 10 percent of all visitors, or about 850,000 in 1987. Foreign visitors are attracted to the Boston area by the low value of the dollar in relation to many other foreign currencies, to increased international business activity and Boston's emerging world class status as a tourist destination.

Higher education in Boston is a large, consistent, but highly seasonal source of visitors. Graduation exercises at the many colleges and universities in and around the city as well as autumn events for alumni and parents bring thousands of visitors that boost hotel occupancy in May and June and again in September and October.

Boston has a few minor drawbacks as a place to visit. The city's rapid growth in development and employment has had some side effects, especially related to transportation. From a tourist's point of view, congestion at rush hours that can stretch a cab ride from the downtown to nearby Logan airport to 30 minutes, the city's irregular street network, and the dearth of available parking spaces tend to tarnish Boston's image. Fortunately, improvements to Boston's transportation system are underway, ranging from improved public transportation, including more water shuttles and taxi cabs, to the construction of an underground Central Artery and Third Harbor Tunnel to Logan Airport. These projects should be completed by the end of the century.

In addition to problems of getting around by motor vehicle, the weather in Massachusetts can be inhospitable during the winter months, as reflected in seasonal hotel occupancy rates. Local tourism promoters, learning from cities in far more severe climates, have placed more emphasis on winter festivals such as "First Night," and may establish other off-season attractions. Yet, the seasonality of the hotel industry is likely to persist.

Tourist visitors, that is, persons visiting for non-business purposes, have consistently accounted for about 20 percent of the total hotel room sales in Boston over the past ten years. In 1977, Boston hotels sold 354,400 hotel room nights to tourists; that number increased 45 percent to 515,200 by 1984 and then by an additional 23 percent to 633,700 in 1987.

The method for projecting hotel room night sales to tourist visitors is described in section XI. The rate of increase between 1987 and 2000, 2.57 percent compound annual growth, reflects projections of regional personal income. The rate vary over time, with the fastest growth through 1990 when the tourist segment will demand 665,400 hotel room nights requiring 2,604 hotel rooms. That represents a 5 percent increase over 1987. Demand is projected to reach 751,800 hotel room nights by 1995, requiring 2,604 rooms, and 828,400 hotel room nights by the year 2000, requiring 3,242 hotel rooms. See Tables VI-5 and VI-6.

Table VI-5. Projections of Personal Income in Boston and New England.

Boston Metro Area *

	1983	1990	2000	
Total Personal Income in thousands of constant 1972 dollars	----	----	----	
	24,586	30,847	38,359	
Compound annual growth rate from previous period (percent)		3.29	2.20	
New England				
	1983	1990	1995	2000
Total Personal Income in millions of constant 1972 dollars	----	----	----	----
	76,154	95,545	107,939	118,958
Compound annual growth rate from previous period (percent)		3.29	2.47	1.96

* New England Counties Metropolitan Area as defined by the Bureau of Economic Analysis.

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
OBERS Projections.

Table VI-6. Tourist Visitor Hotel Room Nights,
Boston, 1985-2000.

Year	Number	Compound Annual Growth Rate (Percent) From Previous Period
----	-----	-----
1985	565,992	--
1990	665,429	3.29
1995	751,771	2.47
2000	828,389	1.96

Source: BRA. Applied growth rates from
projections of total personal income
for New England from the Bureau of
Economic Analysis, OBERS 1985.

GROUP VISITORS

The group segment of hotel demand is made up of "corporate group" visitors, predominately groups of executives attending meetings in a hotel, and "group association" visitors, which are travelers attending a meeting, convention or trade show sponsored by a professional or trade organization, and usually held in a large, separate, meeting facility. In 1977, the total group segment booked 549,300 hotel room nights, about one-third of Boston's total hotel room nights. In 1984, this segment booked 824,300 room nights, a 50 percent increase over 1977. In 1987, hotels sold 1,045,500 room nights to group visitors, a growth of 27 percent over 1984. Over the last ten years, group visitors consistently accounted for one-third of total hotel room demand.

Projections of demand generated by the group segment take into consideration the growing popularity of group meetings in business and the expected surge in group association room sales due to the opening of the expanded Hynes Convention Center. In 1985, 371,000 group corporate visitors came to Boston. By 1990, the number of group corporate visitors will likely reach 421,800, and increase further to 479,600 by 1995 and to 532,100 by the year 2000.

In 1985, group association visitors to Boston numbered 447,200. With the re-opening of the Hynes Convention Center, sales to group association visitors will reach 570,800 by 1990, 728,500 by 1995, and 844,500 by the year 2000.

These projections increase the total group segment visitor count from 818,200 in 1985 to 992,600 in 1990. Assuming 1.1 room nights per visitor, the group segment would require 4,232 rooms in 1990; 1,208,000 visitors in 1995 would require 5,262 rooms; and 1,376,500 visitors would require 5,997 rooms by the year 2000. These increases represent an average compound annual growth rate for the entire group segment of 3.36 percent and a 64 percent increase from 1985 to 2000. The group

market segment is expected to register the highest relative growth rate of the three segments through the year 2000. See Tables VI-7 through VI-14. The Hynes and the hotels suitable for groups could exceed group room sale expectations in the early 1990s if gatherings in Boston become particularly fashionable.

Table VI-7. Convention Delegate Attendance in Boston,
1966-1987.

Year	Delegates (in thousands)	Percent Change	Delegates * (in thousands)
1966	228	--	
1967	271	18.9	
1968	274	1.1	
1969	256	-6.6	
1970	307	19.9	
1971	290	-5.5	
1972	291	0.3	
1973	240	-17.5	
1974	236	-1.7	
1975	189	-19.9	
1976	303	60.3	
1977	179	-40.9	
1978	269	50.3	
1979	288	7.1	
1980	308	6.9	
1981	299	-2.9	
1982	362	21.1	
1983	326	-9.9	662
1984	380	16.6	749
1985	400	5.3	818
1986	450	12.5	891
1987	470	4.4	940

Source: Greater Boston Convention and Tourist Bureau.

* Revised series from GBCTB includes more corporate groups and events outside of Hynes Auditorium.

Table VI-8. Number of Group Visitors
Boston, 1985-2000.

Year	Group Association	Group Corporate	Total
1985	447,200	371,000	818,200
1990	570,753	421,804	992,557
1995	728,442	479,565	1,208,007
2000	844,464	532,079	1,376,543

Source: Pannell, Kerr, Forster for 1985;
1990-2000 projected, see method in text.

Table VI-9. Number of Group Hotel Room Nights,*
Boston, 1985-2000.

Year	Group Association	Group Corporate	Total	Compound Annual Growth Rate (Percent) From Previous Period
1985	512,044	421,085	933,129	--
1990	636,390	468,202	1,104,592	3.43
1995	812,212	532,317	1,344,530	4.01
2000	941,577	590,608	1,532,185	2.65

Source: See Table VI-8.
Assuming 1.1 room nights per visitor,
derived from PKF data.

Table VI-10. Projections of Hotel Room Nights
by Market Segment, Boston, 1985-2000.

(Number of Hotel Room Nights)

Year	Commercial			Total
	Individual	Tourist	Group	
1985	1,333,670	565,992	933,129	2,832,791
1990	1,566,067	665,429	1,104,592	3,336,088
1995	1,962,520	751,771	1,344,530	4,058,820
2000	2,089,080	828,389	1,532,185	4,449,654

Source: See Tables VI-4, 6, and 9.

Table VI-11. Projected Share of Hotel Room Nights
by Market Segment, Boston, 1985-2000.

(Percent of Hotel Room Nights)

Year	Commercial			Total
	Individual	Tourist	Group	
1985	47	20	33	100
1990	47	20	33	100
1995	48	19	33	100
2000	47	19	34	100

Source: See Table VI-10.

Table VI-12. Projected Change in Hotel Room Nights
by Market Segment, Boston, 1985-2000.

(In Percent)

Years	Commercial			Total
	Individual	Tourist	Group	
1985-1990	17.4	17.6	18.4	17.8
1990-1995	25.3	13.0	21.7	21.7
1995-2000	6.4	10.2	14.0	9.6
1985-2000	56.6	46.4	64.2	57.1

Source: See Table VI-10.

Table VI-13. Projected Change in Hotel Room Nights
by Market Segment, Boston, 1985-2000.

(In Compound Annual Percent Growth)

Years	Commercial			Total
	Individual	Tourist	Group	
1985-90	3.26	3.29	3.43	3.32
1990-95	4.62	2.47	4.01	4.00
1995-2000	1.26	1.96	2.65	1.86
1985-2000	3.04	2.57	3.36	3.06

Source: See Table VI-10.

Table VI-14. Projections of Hotel Rooms Required to Meet Demand by Market Segment, Boston, 1988-2000.

(Number of Hotel Rooms)

Year	Commercial			Total
	Individual	Tourist	Group	
1988	5,542	2,358	3,891	11,792
1990	6,129	2,604	4,323	13,057
1995	7,681	2,942	5,262	15,886
2000	8,176	3,242	5,997	17,415

Source: See Table VI-10.

VII. FUTURE HOTEL DEVELOPMENT

Will hotel development supply enough rooms to meet the projected demand while maintaining a healthy occupancy rate of about 70 percent? Conjecture is more useful than a projection model for this question. The timing and magnitude of hotel development projects depend on factors beyond sufficient demand for hotel room nights. Other investment and development opportunities in Boston will influence the plans and commitments for hotel construction. Currently, office and retail and housing construction are commanding most of the attention of developers in Boston. No hotel is currently under construction and proposals for future years are tentative.

The current proposals before the Boston Redevelopment Authority offer some insight into the likely magnitude of hotel development through the rest of the century. In the summer of 1988, eleven hotel development proposals representing over 3,300 rooms appeared to be in the realm of possibility. Though only a minor addition of 100 rooms is expected by 1990, five hotels totalling 1,175 rooms could be considered as possible additions to the hotel stock by 1995. Another five hotels, on a slower development track, representing some 2,000 rooms, may be constructed between 1995 and the year 2000. See Appendix, Table A-4.

In the next few years, the stock of hotel rooms in Boston is likely to remain around the current level for several reasons. The scarcity of available sites for new hotels after the large expansion in recent years presents a challenge to hotel developers. In the short term, tight financing for all but the largest hotel chains may dampen the enthusiasm of many potential hotel developers. Beyond market factors, Boston's rigorous approval process implies that new hotels will not spring up overnight. Further, slow growth in the Boston area's labor force has limited the labor pool for hotels.

However, prospects for the hotel industry nationwide are brighter in the years ahead. Salomon Brothers Inc. forecast strong hotel room demand for 1989-1990, fueled by a healthy economy, a shrinking U.S. dollar, declining gasoline prices, and airline travel incentives. Salomon Brothers expected New York, Boston and Los Angeles to have superior outlooks for hotel operating performance and market demand. Article in 1988 in Urban Land and a report by the Real Estate Research Corporation describe the hotel market as overbuilt nationwide in the short term, but with emerging opportunities for development.

When market conditions in Boston become favorable enough, additional opportunities are bound to arise to tap the projected demand for hotel rooms. Persistent high occupancy and high room rates should overcome any financial, labor, and site constraints and attract investment to hotel development.

The development of about 3,300 hotel rooms by the year 2000 would have substantial economic impact on the Boston area. Assuming that each room would have an average development cost of \$150,000, the total development would generate a total direct expenditure of \$500 million, 7,140 construction jobs, and 2,980 permanent jobs. The latter assumes a constant ratio of 1.1 rooms per employee, based on the current ratio in Boston. The related indirect, tax and operational expenditures would bring additional economic benefits to the city.

Hotel development that may occur before 1991 consists of a 100-room addition to the Holiday Inn at Government Center. This addition would be in the first class category and would cater primarily to commercial individual and hospital related visitors.

Future development under review by the BRA in the summer of 1988 that would expand the hotel stock between 1991 and 1995 included: (1) a 100-room luxury class addition to the Bostonian hotel near Faneuil Hall Marketplace; (2) a 200-room hotel

to be built as part of the mixed-use development planned for the Parcel 18 linkage project in Roxbury. This hotel would attract commercial individuals and tourists, representing the only new hotel under review in the mid-level class; (3) a 270-room luxury hotel to be developed as phase II of the mixed-use development proposed for Lewis Wharf; (4) a 250-room first class hotel to be built as part of the mixed-use Commonwealth Center development in the new Midtown Cultural District, and catering to commercial individual, group corporate and weekend tourist visitors; and (5) a 350-room first class hotel to be constructed as part of the mixed-use, two-million-square-foot North Station/Boston Garden development, serving primarily commercial individual and group visitors. Together these would amount to 1,175 rooms.

Five other hotel development projects would qualify as long-range proposals, but they are not currently under formal review by the BRA, and the magnitudes are uncertain at best. Yet, those projects, or similar modified projects, could amount to 2,000 net new rooms between 1996 and the year 2000.

This tentative list of new hotel projects include no proposals for budget hotels. Only one hotel, with 200 rooms, would be in the mid-level class, and the remaining 3,100 or so rooms, would be in the first class and luxury categories. Perhaps one convention-serving hotel would be constructed across Fort Point Channel on the Fan Pier property.

Barring any unexpected reduction in the number of rooms in any existing hotel, the total number of hotel rooms in Boston, would reach 11,892 by 1990, and perhaps 13,000 by 1995, and 15,000 by the end of 2000.

VIII. MATCH OF FUTURE DEVELOPMENT AND PROJECTED DEMAND

As outlined in the previous section, eleven hotel development proposals could add 3,300 rooms to Boston's stock by the end of the century. Yet, the projected demand for hotel rooms through 2000 implies a development capacity of an additional 5,600 rooms, assuming a 70 percent average annual occupancy rate. In other words, the Boston market could support 7 hotels the size of the 800-room Westin or 19 hotels the size of the Four Seasons. The difference between the projected demand and the proposals, amounting to 2,300 rooms, represents the demand that would either find accommodation outside of Boston or raise the average occupancy rate, or some combination of the two.

For example, if all of the projected demand at the end of the century were accommodated in the current stock plus 3,300, the annual average occupancy rate would reach 80 percent. Such a rate for Boston would be unlikely due to seasonality of demand. The highest annual rate in recent years in the city was 76 percent in 1980. If something less, say 73 percent, became the norm for occupancy at the end of the century, then Boston hotels could support 4,900 additional rooms by the year 2000. At 73 percent occupancy, Boston would accommodate an average of about 11,000 guests per day, or 91 percent of the average daily demand. The 9 percent that would not be accommodated, about 1,150 guests per day, would be lost to hotels outside of Boston, perhaps outside of the region.

What if the national and regional economic projections to the year 2000 turn out to be too optimistic? Even if the demand for hotel rooms were 20 percent lower than the projections in this report, the market would be able to support 3,900 additional hotel rooms at 73 percent occupancy. That would be equivalent to 10 hotels the size of the Marriott Long Wharf.

On a shorter horizon, the expansion of the hotel room stock is currently in a lull, yet demand for accommodations continues to climb. This implies pressure on annual average occupancy rates and average daily room rates in the next few years. This is discussed further in the next section. From 1988 through 1990, the increment in rooms required to accommodate projected demand would exceed the net new room 1,165.

Looking through the end of the century, future development of hotel rooms will need to exceed current proposals by about 2,000 rooms in order to accommodate projected demand for rooms at annual average occupancy rates of about 70 percent. Therefore, the market would be able to support another four or five hotel projects in addition to the ten proposed projects discussed above.

The market segments in which unmet demand could be most readily served are mid-level and budget classes. The predominance of development of luxury and first class hotel rooms during the last ten years appears to continue. Future development proposals, discussed in the previous section, would include merely one mid-level hotel of 200 rooms and one convention hotel of 800 rooms on the waterfront. This would neither relieve the current shortage of moderately-priced hotel rooms in Boston, nor meet the need for additional convention grade rooms within walking distance of the Hynes Convention Center.

To summarize, Boston has hotel development opportunities. The market readily absorbed the five thousand hotel rooms built in Boston between 1978 and 1988, as the city's annual average occupancy rate never fell below 68 percent, with a reported mean of 72.3 percent for the period. Boston stands today as it did in 1978, with market ready for substantial hotel development. In particular, demand for mid-level and budget class hotel rooms presents development opportunities. However, compared to a decade ago, hotel developers today face greater challenges in terms of available

sites, cost of land, competing investments, community plans, and potential shortages of labor.

IX. IMPLICATIONS FOR THE HOTEL MARKET AND CONVENTION FACILITIES

Hotels and convention facilities are interdependent. A convention center needs a pool of hotel rooms nearby to accommodate its users, and hotels benefit from business generated by a steady stream of group visitors. As outlined in the previous chapters, demand for hotel rooms in Boston appears likely to exceed supply through the year 2000. If future development does not fully satisfy demand, the hotel industry could expect the following trends.

1. Occupancy Rate

The annual average occupancy rate in Boston's hotels is unlikely to increase above 73 percent, the average annual rate in 1987, due to the inherent difficulty of selling Boston hotel rooms during the off-season and the full or near-full occupancy at peak times. Though the new Hynes Convention Center is likely to attract additional off-season business, current pre-booking suggests that Boston remains only a moderately attractive destination during the winter months.

2. Room Rate

Many factors influence the determination of a specific hotel's room rates, including location, season, guest type, and accommodation class. Yet, heightened demand for rooms will be the dominant factor in rate trends. Expectations of annual rate increases on the order of 8 to 12 percent, or double the expected rate of inflation, would be consistent with this report's projections of demand and the modest new supply over the next few years. If current market conditions were to persist through 1995, for example, the average daily room rate in Boston would rise from \$97 in 1987 to a range of \$133 to \$155 in constant 1987 dollars by 1995.

3. Market Segmentation

Increased room demand and higher room rates would tend to reallocate hotel room night sales for each market segment. Hotel operators would favor booking rooms to

the highest paying and most frequent customers. The commercial individual and first class tourist customers represent more revenue more often than guests in the group association and budget tourist classes. Customers for which proximity to the downtown area, convenience and amenities outweigh price considerations would, in effect, outbid customers who are more sensitive to price. A trend of rising room rates in Boston would continue the erosion of the city's mid-level and budget accommodations.

Tourist visitors seeking rooms in budget hotels have few options in the city, and will continue to look across the Charles River or along the Massachusetts Turnpike. While those visitors will continue to patronize Boston's tourist attractions, some of their expenditures will occur elsewhere in the metropolitan area.

For the convention trade, the trend of rising room rates may constrain the growth in conventions and delegates in the city. In season, Boston's hotel market has become a seller's market; that is, hotel operators experience demand for accommodations in excess of supply of rooms. In such favorable market conditions, hotel operators would be less willing to book blocks of rooms well in advance at a discounted group rates. That would make Boston somewhat less attractive as a convention destination.

4. Convention Facilities

Boston's convention facilities have been expanded and upgraded substantially in the last ten years. The John B. Hynes Veterans Memorial Convention Center, re-opened in 1988, with 193,000 square feet of exhibit space in 435,000 square feet of total meeting space, or double its capacity before renovation. The new Hynes will be suitable for 95 percent of the nearly 900,000 available meetings and conventions that

take place in the nation annually. Though it will not be completely finished until 1989, the Hynes hosted 100 groups in 1988.

In addition, exhibition space became available on the waterfront with the opening of the World Trade Center on Commonwealth Pier in 1986 with its 120,000 square-foot exhibit hall and 22,200 square feet of meeting rooms; and near the University of Massachusetts Boston with construction of the Bayside Expo Center in 1983 with its 184,000 square feet of exhibit and meeting space. See Table IX-1. The Expo Center is planning an expansion by 1989 that would add a fourth exhibition hall with an area of 100,000 square feet. As noted above, Boston's new hotels are hosting conventions and events as well. On the Greater Boston Convention & Visitors Bureau's master list, 38 percent of the events were hosted solely by hotels and many of the events that held exhibits at the Hynes also held meetings in nearby hotels. See Table IX-2.

The next addition to Boston's event, convention and meeting capability probably will be the new Boston Garden. The new auditorium would accommodate political conventions, concerts, and other special events. This would create another locus for events in the city.

The hotel market trends suggest that group visitors will not increase their market share of hotel room nights by more than a percentage point or two through the end of the century, despite the recent expansion in convention facilities. Demand in the commercial individual and tourist visitor markets will be nearly as strong as demand in the group category. Perhaps more importantly, future hotel development would need to exceed what appears to be its likely magnitude if group visitors are to gain in market share and not squeeze other visitors out of the Boston market.

Toward the end of the century, Boston may be ready to expand convention facilities to a level comparable to the nation's premier convention cities: New

Table IX-1. Characteristics of Convention Facilities in Boston, 1988.

Facility	Meeting Rooms			Exhibit Halls			Ballrooms			Multi-Purpose Sq.Ft.	
			Booth					Booth			
	Number	Sq.Ft.	Number	Sq.Ft.	Capacity	Number	Sq.Ft.	Capacity			
Bayside Expo Center	7	16,900	3	166,722	800	0	0	0	0	0	
Hynes Convention Center	38	72,324	5	193,000	1,050	3	24,544	129	145,000		
World Trade Center	13	15,700	1	120,000	575	1	6,500	0	0		
Total	58	104,924	9	479,722	2,425	4	31,044	129	145,000		

Source: Greater Boston Convention & Visitors Bureau, Inc.,
"Boston: Destination Planners' Directory 1987/88," 1987.

Table IX-2. 1988 Events and Meetings by Primary Exhibit
or Meeting Location.

Location	Number of		Percent of Total	
	Events	Attendees	Events	Attendees
Hynes	31	175,800	35.6	16.2
Bayside Expo Center	22	867,300	25.3	79.9
Marriot Copley Place	16	20,800	18.4	1.9
Westin	6	3,350	6.9	0.3
World Trade Center	1	10,000	1.1	0.9
Park Plaza	2	1,600	2.3	0.1
Sheraton	6	6,400	6.9	0.6
Lafayette	1	600	1.1	0.1
Ritz	1	100	1.1	0.0
Holiday Inn	1	200	1.1	0.0
All Locations	87	1,086,150	100.0	100.0

Source: Masterlist of Greater Boston Conventions and Events, 1987-88,
Greater Boston Convention and Visitors Bureau, Inc., 1988.
Note that the masterlist does not include all events.
By actual count in 1988, the Hynes had 100 events and
348,700 attendees.

York, Chicago, Los Angeles, New Orleans, Las Vegas, and Atlantic City. However, further expansion of convention facilities would need to coincide with a much greater expansion of the hotel stock, especially in convention grade hotel rooms, than current plans and proposals would imply. Hotel development did respond to the expansion of the Hynes Center, and a step to the next level could spur similar growth. Considering that planning, design, and construction of the new Hynes Center took about ten years, an assessment of the future of convention facilities, if begun in the next couple of years, would be timely.

In summary, the hotel market through the end of the century is likely to be characterized by strong demand for rooms, lags in construction of additional rooms, high average occupancy, and rising room rates. If those conditions hold and the supply of convention rate rooms within walking distance of the Hynes Convention Center prove to be inadequate, the potential of the Hynes may not be fully realized, and further expansion of convention facilities would not be needed. Similarly, the tourist trade would fail to reach its potential in generating revenue for businesses in Boston. Expansion of the city's hotel stock, especially in the mid-level and budget classes, would ease pressure on rates and maintain Boston's popularity as a destination for groups and tourists.

X. ECONOMIC IMPACT

The tourism industry, which includes hotels and convention facilities, has a substantial impact on the city and regional economies. The Greater Boston Convention and Visitors Bureau estimated that 8.5 million people visited Greater Boston (Suffolk, Middlesex, and Norfolk Counties) in 1987. The Bureau estimated that these visitors had a total economic impact of \$5.9 billion dollars in Greater Boston in 1987. The total impact is measured by estimating visitor expenditures, taxes, employee wages, marketing expenditures, and spending on construction of facilities serving the industry. Boston itself would have generated about \$4.0 billion, or 69 percent, of the Greater Boston total.

In 1985, the consulting firm Pannell, Kerr, Forster, in conjunction with The United States Travel Data Center, completed a study entitled: An Economic Impact Study of the Tourism and Convention Industry for the Greater Boston Area. In that study, hereinafter referred to as the Pannell, Kerr, Forster study, the impact of the tourism industry is divided into two categories: 1) direct impacts, consisting of expenditures by visitors for lodging, food service and other purchases; wages paid to employees of hotels and other visitor industry employees; and taxes paid to the city and state, including sales, income, property and hotel room occupancy taxes; and 2) indirect impacts, consisting of economic activity generated by the direct expenditures. For example, hotel workers or employees of food service vendors use wages to buy groceries, clothes, haircuts, and the like.

DIRECT IMPACT

Looking at the city, the hotel industry plays an important role in the urban economy. The Boston tourism industry in general and the hotel industry in particular generate considerable tax revenues for both the city and the state. In addition to the sales, income, and property taxes that are related to expenditures by visitors,

all hotels and motels pay a lodging tax at a rate of 9.7 cents per dollar of room sales. The state and city split the collection: 5.7 cents and 4.0 cents go into the state and city coffers, respectively.

In addition, the City of Boston collects property taxes on the hotels' land and improvements, and charges small licensing fees. The City's Budget Department projects that, in fiscal year 1989, the hotel room occupancy tax will generate \$11.9 million for the city. In fiscal year 1986, the first full year of the lodging tax, the City of Boston collected \$6.8 million. In addition, the City projects that property tax revenue from hotels in fiscal year 1989 will amount to \$12.5 million, based on a total assessed value of \$559 million and a rate of \$22.44 per thousand dollars of assessed value. The average estimated tax revenue per hotel room will be \$1,399 for fiscal year 1989.

Together, lodging tax and property tax revenue from Boston hotels will bring \$24.4 million to the City in fiscal year 1989. That represents a significant sum for Boston: hotels will account for 4.4 percent of the projected \$553.8 million in local tax revenue.

Based on these revenue projections, hotel occupancy tax revenues collected from Boston hotels by the Commonwealth of Massachusetts will amount to \$17 million in fiscal year 1989. In addition, the state collects sales and gasoline taxes from purchases by visitors, as well as individual and corporate taxes on income generated by visitors. The Greater Boston Convention and Visitors Bureau estimates that direct tax revenues generated by the Greater Boston visitors account for approximately 50 percent of the total tax revenue generated by the tourism industry state-wide.

In addition to revenue, the hotel industry employs a growing number of workers. Hotels are the primary source of jobs in the tourism industry in Boston. According to a set of estimates based on data from the Massachusetts Department of Employment

Training and the Bureau of Economic Analysis, hotels in the city generated 11,949 jobs in 1987, or 1.9 percent of all jobs in Boston. In 1977, hotels accounted for only 5,908 jobs, or 1.1 percent of all jobs in the city. See Table X-1.

While the total number of employees in the industry increased dramatically since 1977, the number of employees per hotel room increased just slightly. Hotels employed 0.88 workers per room in 1977, and 1.01 per room in 1986. This gain may be explained by expansion of the stock of first class and luxury hotel rooms. The new hotels, though perhaps more efficient than older hotels in some respects, would require more labor for guest services than mid-level hotels which held a greater share of the Boston market ten years ago.

Hotel jobs, including food service jobs within the hotels, offer relatively low wages, but the average wage is increasing. The average annual wage for Boston hotel employees in 1987, according to the state's Department of Employment Training, was \$15,647. In comparison, the average annual wage was \$23,745 in all services and \$26,240 in all industries. Average wages in Boston hotels increased 22 percent between 1977 and 1987, adjusted for inflation. For the period 1980-1987, the inflation-adjusted average wage in hotels increased 25 percent, while the average wage for all industries in Boston increased 17 percent. The differential may reflect the Boston area's tight labor market for low-wage jobs.

Based on the above employment and average wages, the total annual employee payroll for Boston hotels in 1987 would have been \$186.9 million. The total payroll in 1977 would have been \$75.6 million in constant 1987 dollars.

In terms of occupations, the majority of the jobs in the tourism industry are nonprofessional, wage-earning positions. Typical occupations in hotels include housekeepers, laundry workers, front desk clerks, reservationists, bellmen, doormen,

Table X-1. Hotel Employment in the City of Boston, 1977-1987.

Year	Average Annual Employment	Percent Change	Average Annual Wage (\$)	Percent Change	Average Annual Wage (\$)	Percent Change
1977	5,908	--	6,882	--	12,801	--
1978	6,534	10.6	7,081	2.9	12,463	-2.6
1979	6,265	-4.1	7,968	12.5	12,749	2.3
1980	6,517	4.0	8,780	10.2	12,468	-2.2
1981	6,919	6.2	9,574	9.0	12,255	-1.7
1982	7,838	13.3	10,381	8.4	12,769	4.2
1983	8,869	13.2	11,622	12.0	13,598	6.5
1984	9,756	10.0	13,044	12.2	14,609	7.4
1985	10,756	10.3	13,589	4.2	14,540	-0.5
1986	10,930	1.6	14,920	9.8	15,517	6.7
1987	11,949	9.3	15,647	4.9	15,647	0.8
Change 1977-87	6,041	102.3	8,765	127.4	2,846	22.2

* Average annual wage in constant 1987 dollars, using the Consumer Price Index for the Boston Area.

Source: Massachusetts Department of Employment and Training; U.S. Department of Commerce, Bureau of Economic Analysis.

valet parkers, security guards, cleaners, various food service workers, clerical workers, and maintenance workers. The city's low unemployment rate, 3.2 percent in 1987, translates into a shortage of unskilled, low-wage labor for the tourism industry. The shortage of affordable housing in Boston constrains growth in the city's low-wage labor force. A recent survey of hotel workers by their union found that most of their households could neither afford the Boston area's median home price nor the median rent. Late in 1988, the hotel workers in Boston and the hotels agreed on a contract provision that creates a housing assistance fund for the workers.

In assessing the direct impact of tourism, the "export" nature of the industry is important to consider. That is, hotels and convention facilities generate spending primarily from visitors from further than 100 miles away. Unlike residents, visitors do not burden Boston's job market, school system, and housing market. While visitors do add to public service requirements such as traffic control and street and park maintenance, those costs would be dwarfed by visitors' injections of non-resident income into the local economy.

The direct impact of hotel visitors indicates that visitors that cannot find suitable accommodation in Boston due to high occupancy or high rates represent foregone economic benefits to the city. For example, if Boston's hotel stock were 2,000 rooms short of its potential in 2000, that would represent 533,000 potential hotel room nights that would not be sold. If the typical visitor spent \$295 per day, an estimate from 1985 adjusted for inflation to 1987 dollars, then the city would miss a potential \$157 million in direct expenditures by hotel visitors in the year 2000. In addition, 4 cents of every dollar in room sales would go to the city. At \$95 per room night, the average annual room rate of 1987 which would probably be much

higher by 2000, the foregone hotel room sales would have generated \$2.0 million more in city tax revenue in the first year of the new century.

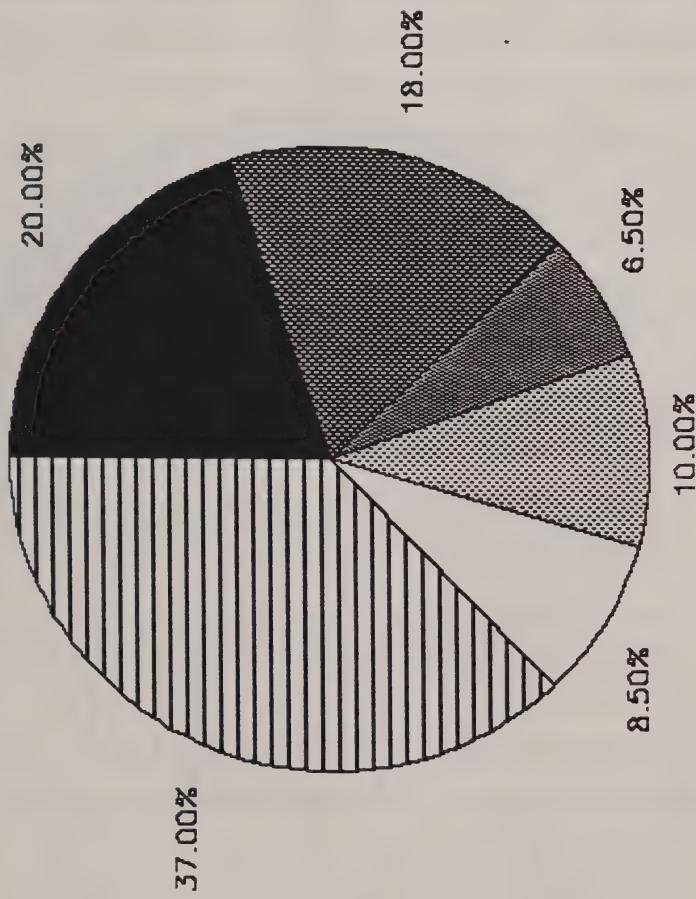
Looking at Greater Boston, Pannell, Kerr, Forster, as published in the Greater Boston Convention and Visitors Bureau's 1987 Annual Report, estimated that 8.5 million visitors came to Greater Boston, up from 7.3 million in 1985. About 70 percent, or 6 million, of the visitors came to the city. Survey data in Greater Boston indicate that 70.9 percent of all visitors stay overnight, 49.6 percent stay in hotels and motels, and 21.3 percent stay with friends and relatives, and 29.1 percent are day visitors.

Visitors to Greater Boston in 1987 spent approximately \$2.6 billion, about \$1.8 billion of which would have been spent in the City of Boston. In 1986, visitors to Greater Boston allocated 37 percent of their direct expenditures to food service, 20 percent to lodging, 18 percent to commercial transportation, 10 percent to auto transportation, 7 percent to entertainment and recreation, and 8 percent to general retail trade. See Figure X-1. Lodging places accounted for 27 percent of the food service expenditures by visitors.

Further, Pannell, Kerr, Forster's 1985 survey found that 79 percent of all direct visitor expenditures were made by overnight hotel guests, who comprised only about half of all visitors. Direct spending by hotel visitors was found to be approximately \$580 dollars per visitor. Dividing that figure by the average length of stay, 2.1 days, the average amount spent by a hotel visitor per day was \$276 in 1985.

A set of estimates based on Pannell, Kerr, Forster's study also highlight the importance of tourism to the metropolitan area's economy. In 1986, the tourism industry in Greater Boston, including hotels, generated 48,500 jobs with an average

Figure X-1: Direct Economic Impact of Visitors to Greater Boston, 1986
(percentage of total dollars)



Source: B.R.A. Research, Pannell Kerr Forster, U.S. Travel Data Center

annual wage of \$10,945, representing an annual total payroll of \$531,000,000. The majority of the jobs, 27,700 or 57 percent, were in food services which pay particularly low wages, tips not included. Lodging employed 10,700, or 22 percent of all workers in visitor industries in the metro area. See the composition of employment by type of business in Figure X-2. Total annual payroll increased from 1985 to 1986 by 10.5 percent, comprising a 5.0 percent increase in employment and a 5.7 percent rise in average annual wages.

INDIRECT IMPACT

In addition to the direct impacts of the hotel and convention industry on the Boston economy, the indirect or secondary effects of direct spending must be evaluated. As described in the Pannell, Kerr, Forster study:

"Indirect spending occurs when businesses that receive income directly from visitors, such as restaurateurs, in turn purchase goods, such as food and beverages, and services, such as electricity and building maintenance, from their local suppliers. These so-called second round purchases generate additional output or sales indirectly from first round visitor expenditures for other businesses.

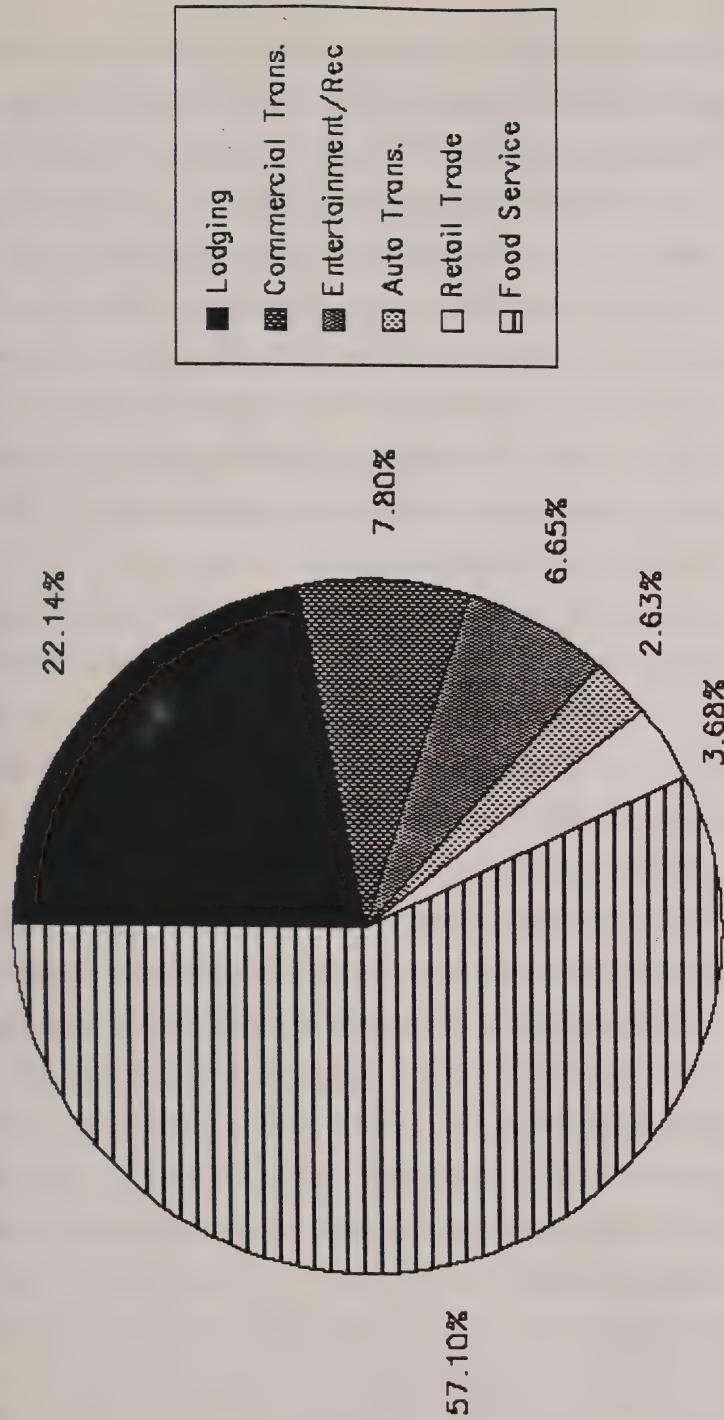
"Those supplying the restaurateurs must, in turn, purchase goods and services from their suppliers, and so on. This chain of buying and selling continues in the area until the initial visitor purchase completely leaks out of the spending system or the specific jurisdiction either through taxes, purchases from suppliers outside the area (imports), business savings, or payments to employees. During the process of buying and selling within that area, output is generated which is a multiple of the direct injection from the initial visitor spending.

"The other type of secondary impact is the induced effect on sales or output. This results as the employees of the visitor businesses and their suppliers also spend part of their earnings in the area. This spending itself generates sales additional to the indirect impact.

"The sum of the indirect and induced effects comprises the total secondary impact of visitor expenditures in the area. The ratio of the sum of primary output generated plus secondary output to initial expenditures alone is commonly termed the sales or output "multiplier."

Based on estimates of the Bureau of Economic Analysis of the U.S. Department of Commerce using the Regional Input-Output Modeling System (RIMS II), May 1986, the

Figure X-2: Employment Attributable to Boston Tourism by Business Sector, 1985



Source: B.R.A. Research, Pannall Kerr Forster, U.S. Travel Data Center

output multiplier for hotels in Massachusetts is 1.95. This means that the ratio of total output to the initial visitor spending is 1.95 to 1.00. For every \$1.00 spent by a visitor in the state, an additional \$.95 is generated in indirect and induced impact. For visitor spending in the Boston area, the multiplier still expresses changes statewide. If the Department of Commerce had computed a multiplier for the Boston area only, it would have been smaller than the state multiplier because some of the direct and indirect effects spread to other parts of the state.

Applying the output multiplier to the \$2.6 billion of direct visitor spending in 1987 in Greater Boston, the total output value would be approximately \$5.1 billion in Massachusetts. For the city's portion of direct visitor spending, \$1.8 billion, the total output value in the state would be \$3.5 billion.

In addition to the direct and indirect impact of visitor expenditures described above, construction of hotel and convention facilities generates jobs and income. According to a study by Kenneth Ball, about 25 percent of construction spending would go to labor, with the remainder being divided among materials, construction equipment, and contractor overhead and profit. During the period 1985-1987, the following hotel and convention facilities were under construction: The Four Seasons Hotel, The Lafayette Hotel, Embassy Suites Hotel, Susse Chalet Lodge, Boston Harbor Hotel, the Inn at Children's Hospital, Quality Inn, the World Trade Center and the Hynes Convention Center. The Research Department of the Boston Redevelopment Authority estimated that, in 1985, a total of \$95.6 million was spent on construction of hotel and convention facilities, which would have supported a total of 683 construction jobs at an average annual wage of \$35,000. In 1986, the total spending was estimated to be \$74.2 million, which would have generated 530 jobs at an average annual wage of \$35,000.

Direct spending in the construction industry, like direct visitor spending, generates secondary impacts. The total economic impact of construction may be estimated by applying the Bureau of Economic Analysis output multiplier for new construction in Massachusetts, 2.12, to the total annual construction spending. In 1985, the construction of hotel and convention facilities in Boston generated a total economic impact of \$95.6 million times 2.12, or \$202.7 million, in the state. Using the same method, the total impact in Massachusetts of Boston hotel and convention construction in 1986 was \$157.5 million. Note that the construction figures used above are based on construction costs alone, excluding additional development expenses such as the cost of land, furniture, fixtures and equipment, and opening expenses. By the same method, foregone construction of hotel rooms in the future, if the potential investment were not channeled into other parts of the Boston economy, would translate into substantial foregone construction wages and indirect benefits in Massachusetts .

Sustaining the Visitor Industry

Aside from its measurable economic impact, the hotel and convention industry does much to promote and uphold a positive image of Boston. If a city is known by its hotels, then Boston's image has improved tremendously in the last ten years. Marketing programs, gracious accommodations and services, and other visitor activities sponsored by the industry do much to create and enhance the experience a visitor has when he or she comes to Boston. The city now has an up-to-date, attractive hotel and convention industry that deserves continued support and attention.

Currently, the Greater Boston visitor industry competes with cities nationwide for groups and individual visitors. A report by the Greater Boston Convention & Visitors Bureau, A Competitive Analysis, April 1989, points out that the Boston area

ranked 19th among 23 large metropolitan areas in per capita visitor bureau spending in 1987. As examples, the Boston area's bureau spending per capita, 89 cents, was only 64 percent and 28 percent of the amounts spent by the San Francisco and San Diego areas, respectively. In order to sustain a healthy hotel market, the state and city need to at least maintain if not increase resources for the visitor industry. The return in tax revenue from occupied hotel rooms and visitor retail sales justifies continued investment in promoting the Boston area's attractions.

XI. DATA AND METHODS

This section describes this report's data and methods. The current and historical data found in sections II, III, IV, V, and IX, come from several sources. The BRA's study from 1978, "Hotel and Convention Center Demand and Supply in Boston" is a rich source of information. Data on the Boston area for recent years are available from annual reports of the Greater Boston Convention and Tourist Bureau and from the private accounting firm, Pannell, Kerr, Forster of Boston. Reports by the latter include "Hotel Market Survey Results for the Greater Boston Metropolitan Area," December 1986, and its monthly releases: "Trends in the Hotel Industry, Boston".

Comparative data for large cities in the United States (section IV) were found in reports of the U.S. Department of Commerce, Bureau of Economic Analysis; "Business Travel News", August 27, 1987; Pannell, Kerr, Forster, "Special Supplement: Trends in the Hotel Industry, United States Cities Projections 1987-1988;" and Laventhal & Horwath, "Annual Report on Hotel and Motor Hotel Operations, 1985."

Data for the national and regional economic analysis (section V) were found in reports of the U.S. Department of Labor, Bureau of Labor Statistics, "Monthly Labor Review", September 1987, Volume 110, Number 9; and the Bureau of Economic Analysis, "Metropolitan Area Projections of Income, Employment, and Population to the year 2000," 1985. In addition, the BRA's "Economy" section in the City of Boston's Official Statement, June 22, 1988, provided information on regional and local economic trends.

Projections of demand for hotel rooms (section VI) drew from several sources. The BRA provided annual counts of hotel rooms in operation in Boston and annual estimates of total employment in the city. Pannell, Kerr, Forster provided average

monthly and annual hotel occupancy and room rates for Boston hotels. Other sources are noted in the description of the projection method below.

The hotel market may be divided into three segments. The commercial individual segment includes visiting business representatives, rooms under contract to airlines or other corporations, and rooms occupied by sports teams, and government and educational institutions. The tourist segment includes individuals, tours, and special packages. The group segment covers corporate groups as well as associations, conventions, and trade shows. The three segments have maintained a steady share of the total hotel room market since 1976.

This report uses a different projection method for each market segment. For commercial individuals, the ratio of hotel room nights to total employment in Boston is the key factor in the projection of hotel room nights in that segment. In projection years, an expected value of that ratio times the expected employment level would produce a projected demand for hotel room nights.

The premise for use of total employment is that economic activity, measured by employment, generates business visitors to Boston. If the relationship between economic activity and business visitors were fixed, an increase in total employment would bring a commensurate influx of commercial individuals to Boston hotels. However, the ratio of hotel room nights in this segment to total employment has varied over time. The ratio varied from 1.67 to 1.89 hotel room nights per employee between 1978 and 1983. Then, between 1984 and 1987, the ratio increased from 2.09 to 2.39. The mean value of the ratio of hotel room nights to total employment was 1.85 for the 1978-83 period and 2.27 for the 1984-87 period. See Table VI-3.

Assuming that commercial individuals who visit Boston have a constant propensity to book hotel rooms, the increase in the value of the ratio of hotel room nights to total employment over time indicates that the city's economic activity and

attractiveness have been generating a stream of commercial visitors at a greater rate. This makes sense in light of the structural changes in the city's economy. Employment growth has occurred primarily in business services, legal services, health services, and finance, insurance and real estate, and other service industries. These industry types tend to rely more on face-to-face encounters than Boston's slow-growth (public utilities, retail trade, and construction firms located in Boston) and declining (manufacturing and wholesale trade) industry types. With similar projected changes in structure, the ratio of hotel room nights to total employment in Boston is likely to continue to increase over time.

For the projections to the years 1990, 1995 and 2000 in the commercial individuals segment, the ratio of hotel room nights to total employment was assumed to take on the 1987 value of 2.40 in 1990, then increase by the same nominal increase (0.4) estimated between the 1978-83 and 1984-87 periods. That is, the ratio would be 2.80 for the 1995 and 2000 projections. The projected total employment level for 1990, to which the ratio was applied as a factor, was taken from the BRA projections. See BRA Research Department publication number 247, "Boston Employment Trends and Projections by Industry". The same procedure was used for 2000. The product of the ratio times the projected employment is the projected demand for hotel room nights.

Projections of hotel room demand by tourist visitors relied on the relationship between tourist visitors and total real personal income in New England. Most of Boston's tourists come from the six-state region. Theoretically, changes in total personal income, adjusted for inflation, would explain to a large extent changes in tourism. The most reliable indicator of tourist visitors to Boston is the Aquarium. This is an all-weather, centrally-located attraction that has had uninterrupted service over the last 12 years. Attendance at the Aquarium increased by 46 percent from 1975 to 1987, while real personal income in New England grew by 45 percent.

Year to year percentage changes in the two series do not match, but Aquarium attendance appears to follow changes in personal income. See Appendix, Table A-3.

Tourist visitors, and their demand for hotel rooms, could be expected, then, to grow at a rate similar to the rate of increase in regional personal income. The Bureau of Economic Analysis projected that New England's real personal income would increase at a compound annual rate of 3.29 from 1983 to 1990, 2.47 from 1990 to 1995 and 1.96 from 1995 to 2000. This report assumes the same compound annual growth rates for tourist hotel room nights to 1990, 1995 and 2000, assuming also that tourists' propensity to book hotel rooms remains constant.

For group visitors, this report uses the projection rates of Pannell, Kerr, Forster for group association and group corporate submarkets through 1995. Those rates take into account national demand for group accommodations. After 1995, the rates of growth in two submarkets will likely slow down. The renovated Hynes Auditorium will have reached capacity by about 1990, and by 1995 will have satisfied the pent-up demand of the late 1980s and will have lost its novelty for some group associations. To represent these trends, the compound annual growth rates for association and corporate groups of 5.0 and 2.6 are reduced by 40 percent and 20 percent, respectively, for the 1995 to 2000 period. Based on these projections, the corporate share of the group visitor hotel room demand would fall from 45 percent in 1985 to 39 percent in 2000.

The potential unmet demand, if development of hotel rooms were to lag, may be understated due to "latent" demand for hotel room accommodations. That is, at peak times in recent years, Boston hotels have filled up and turned away potential guests. A larger hotel stock in 1987, for example, could have accommodated more visitors at peak times, which would have increased total hotel room night sales in that year. However, room sales during off-peak times would not have changed, which would ha-

slightly lessened the annual average occupancy rates. In any case, this report lacks the data necessary to measure "latent" demand.

The total market demand for hotel room nights is the sum of the commercial individual, tourist, and group market segments. The number of hotel rooms required to meet the projected demand is computed as hotel room nights divided by 365 days divided by the assumed occupancy rate. The latter is a key variable. The recent (1988) occupancy rate of 73.4 percent was approaching a maximum considering the seasonal nature of hotel demand in Boston. Industry analysts who were contacted for this study expect a healthy hotel market in Boston to settle at a 70 percent occupancy rate. Using 70 percent as a divisor in the computation above would imply a requirement of 17,415 hotel rooms by 2000, or 5,623 rooms in addition to the current stock. If supply in 2000 were short of that requirement, the market would have a higher occupancy rate. Pushing the occupancy rate above 70 percent adds undue pressure for room rate increases and causes periods of city-wide room unavailability, as experienced during the past several years.

XII. APPENDIX

The following adds detail to the discussion in section V on national and regional economic trends.

The Bureau of Labor Statistics (BLS) considers the chronic U.S. trade deficit as the most pervasive problem facing the national economy and has adjusted its projection methodology to reflect this belief. Recent reductions in the value of the dollar are treated by BLS as a first step in the effort necessary to shrink the wide trade gap. The Bureau's moderate-growth alternative projections, therefore, reflect a gross national product (GNP) influenced by greater productivity increase, slower labor force growth, a moderately tapering unemployment rate and a slowly improving foreign trade balance.

The BLS long term forecast, 1986 to 2000, assumes the existence of the business cycle. The econometric model used by BLS to arrive at its projections, therefore, assumes the occurrence of two recessionary periods within the fourteen-year forecasting term. Practically speaking, this assumption means that flat and negative growth rates are periodically applied to certain more volatile and cyclically sensitive GNP components, specifically, consumer durable goods, producer's durable equipment and construction.

Some key underlying assumptions influencing the BLS projections are as follows. Defense spending will be gradually curtailed throughout the next decade. Also, in light of the large federal budget deficit, no real growth is assumed during the 1986-1995 period for most social programs, including food stamp benefits, medicare payments and social security benefits. After 1995, resumption of modest growth in these and other categories of social programs is expected. Federal subsidies including federal grants in aid to state and local governments are assumed to be flat in real terms throughout the period. On the revenue side, both personal and

corporate effective tax rates are assumed to increase in the short term, to be followed by a gradual decline by 2000.

Assuming aggressive national and international monetary policy, and growth of the broadly defined money supply (M2), is assumed to parallel projected growth in nominal GNP and yield both short and long-term interest rates that remain relatively flat in real terms, rising approximately one real percentage point over the fourteen-year period. The projections assume an annual inflation rate of 5 percent for the U.S. and centrally planned economic areas, and a stable exchange value for the dollar. The projections also assume a gradual doubling of the real imported oil price over the fourteen-year projection period.

The following is a summary of the "Economy" section of the City of Boston's Official Statement dated February 16, 1989.

The City of Boston is the economic center of both the Commonwealth of Massachusetts and the New England region, providing professional, business, financial, communications, higher educational, medical and public utility services. The city also serves as an important cultural, transportation and government center. For these reasons Boston has both helped generate and benefited from the current economic growth of the New England region.

In the years since 1976, New England has surpassed the national average in several measures of economic growth according to data compiled by the U.S. Bureau of Labor Statistics and the U.S. Bureau of Economic Analysis. Employment in New England grew 32.2 percent from 1976 to 1986, compared to a 26 percent gain for the nation. The regional unemployment rate fell below the nationwide rate in 1978 for the first time since 1967, and has continued at a lower level since then. The 1982-1986 economic recovery brought an increase of 1,011,000 jobs, a 15.4 percent employment growth rate in New England compared to a 12.1 percent growth rate for the nation. The 39 percent increase in total personal income in New England between 1983 and 1987 was the largest gain of the nine census regions. Through the third quarter of 1988, total personal income in New England increased 8.9 percent over the previous four quarters, which topped all other census regions.

The economic performance of Massachusetts has been consistent with regional trends. Employment increased by 31 percent in Massachusetts between 1976 and 1986. In total personal income growth, Massachusetts ranked sixth among all fifty states for the 1982-1986 period with a 10 percent annual rate compared to the national rate of 8 percent. During 1987, Massachusetts' total personal income grew by 7.6 percent, topping the U.S. gain of 5.8 percent. The 1987 unemployment rate in Massachusetts

declined to 3.2 percent, the lowest since before 1970 and the lowest rate among the eleven largest industrial states.

The economy of the Boston metropolitan area also has shown strength. Over 600,000 jobs were created in the decade ending in 1986 as the high technology and services sectors grew rapidly. Metropolitan area employment continued to grow in 1987 as the jobless rate dropped to 2.7 percent, the lowest among the thirty-four largest U.S. metropolitan areas.

Total employment in the city increased by 122,130 between 1976 and 1988 as growth in a broad range of service and finance industries more than offset decreases in manufacturing and wholesale trade industries. The city's employment has grown at an annual rate of 2.2 percent, an increase of nearly 13,000 jobs annually since 1982.

Unemployment in the city declined substantially from the peak level in 1975 of 12.8 percent to 6.1 percent in 1980, when it went below the national average. Since then, the city's average annual unemployment rate has remained well below the national rate. After rising through 1982, the city's rate fell to 4.4 percent in 1986 and 3.2 percent in 1987. In October 1988, the city's unemployment rate was 3 percent while the national rate was 5.0 percent.

Between 1950 and 1987, the city's employment structure experienced substantial change. The city's service industries, including transportation, communication, public utilities, finance, insurance, business services and professional services, expanded their share of the city's total employment from 32 percent in 1950 to 60 percent in 1987, while the share of total employment in manufacturing and trade declined to 6 percent and 14 percent, respectively.

Services have led employment growth in the national and New England economies. Growth in high technology, finance, business and professional services, higher education and medicine has made the New England and the city economies more

diversified and less vulnerable to downturns in national business cycles. The city's per capita income, \$17,227 in 1986, was 17.7 percent above national per capita personal income. An historical summary of per capita income shows that, from 1980 to 1986, the city's per capita income grew at a rate greater than that for the nation, a notable improvement compared to the 1970-1980 period when it rose at a relatively slower rate. The city's per capita income rose at a faster rate than those for the nation, region, state, and metropolitan area between 1982 and 1986. The city's median household income rose concurrently, from \$7,835 in 1970, to \$12,530 in 1980 and to \$19,250 in 1985.

The latest information indicates that average annual wages earned, by place of work, have been consistently higher in the city than in the Boston metropolitan area and the Commonwealth in each of the years of the 1980-87 period. This would seem to contradict a widely held notion that the city, with its relative concentration of employment in a broad range of service industries, would be a lower wage area. Except for manufacturing, wholesale trade, and local government, wages in the city were higher for all major industry types. For all industries combined, the city's average wage level, \$26,240, was 7 percent greater than that in the metropolitan area, \$24,486, and 17 percent greater than the average state wage level, \$22,458. This does not necessarily mean that a firm in the city would pay more than an equivalent firm in the suburbs for an equivalent position. More likely, the data indicate that the city's mix of businesses and occupations favors higher paying positions.

During the years 1977-1987, the cost-of-living rose 86 percent in the city, while the national index increased 88 percent. From November 1987 to November 1988, the cost-of-living in the Boston area rose 6.3 percent compared to 4.2 percent for the nation. Housing costs have been the main source of increase, as strong demand

for housing and only modest increases in supply have led to huge appreciation in home prices, rising rents and diminishing vacancies since 1983.

Table A-1: Boston's Hotels by Class and Market Area

<u>Name of Hotel</u>	<u>Market Area</u>	<u>Class</u>
Four Seasons Hotel	Back Bay/Park Sq.	Luxury
Ritz-Carlton Hotel	Back Bay/Park Sq.	Luxury
The Bostonian Hotel	Financial	Luxury
Hotel Meridien	Financial	Luxury
Boston Harbor Hotel	Waterfront/Fan Pier	Luxury
Back Bay Hilton	Back Bay/Park Sq.	First Class
Boston Park Plaza Hotel	Back Bay/Park Sq.	First Class
The Colonnade	Back Bay/Park Sq.	First Class
Copley Plaza Hotel	Back Bay/Park Sq.	First Class
Marriott Copley Place	Back Bay/Park Sq.	First Class
Sheraton Hotel	Back Bay/Park Sq.	First Class
The Westin Hotel	Back Bay/Park Sq.	First Class
Lafayette Swiss Hotel	Financial	First Class
Omni-Parker House	Financial	First Class
Marriott Long Wharf	Waterfront/Fan Pier	First Class
Embassy Suites Hotel	Outlying	First Class
57 Park Plaza Hotel	Back Bay/Park Sq.	Middlelevel
Lenox Hotel	Back Bay/Park Sq.	Middlelevel
Quality Inn	Back Bay/Park Sq.	Middlelevel
Holiday Inn	Gov't Ctr/NoSta.	Middlelevel
Howard Johnsons Kenmore	Outlying	Middlelevel
Inn at Children's	Outlying	Middlelevel
Ramada Inn	Outlying	Middlelevel
Logan Airport Hilton	Airport	Middlelevel
Ramada Inn Logan	Airport	Middlelevel
Copley Square Hotel	Back Bay/Park Sq.	Budget
Eliot Hotel	Back Bay/Park Sq.	Budget
Midtown Hotel	Back Bay/Park Sq.	Budget
Chandler Inn	Outlying	Budget
Charles River Motel	Outlying	Budget
Howard Johnsons Fenway	Outlying	Budget
Howard Johnsons S.E.	Outlying	Budget
Milner Hotel	Outlying	Budget
Susse Chalet Lodge	Outlying	Budget
Terrace Motor Lodge	Outlying	Budget

Source: B.R.A. Research Department 1987 Hotel and Convention Center Survey.

Table A-2. Monthly Average Hotel Occupancy Rates for Boston Hotels,
1980-1987.

Occupancy Rates in Percent									Mean Rate for Month
Month	1980	1981	1982	1983	1984	1985	1986	1987	-----
January	57.6	52.3	52.5	46.7	50.8	50.7	47.5	51.5	51.2
February	61.1	58.4	58.0	48.7	51.5	51.9	57.4	59.6	55.8
March	69.7	63.9	63.2	58.9	62.3	62.0	61.7	65.5	63.4
April	79.2	79.3	71.2	74.1	75.2	74.2	73.2	72.0	74.8
May	84.3	82.5	75.2	78.8	77.6	74.5	81.6	76.4	78.9
June	85.9	83.9	79.1	80.2	79.9	79.6	85.1	82.1	82.0
July	78.2	78.0	71.3	66.6	71.0	67.6	78.0	80.4	73.9
August	84.1	78.5	73.8	78.0	75.8	77.8	84.5	85.9	79.8
September	88.3	83.4	78.8	80.3	81.4	79.3	89.8	89.2	83.8
October	92.9	89.1	87.8	89.8	92.4	90.0	92.1	92.0	90.8
November	74.4	70.9	64.5	70.8	68.8	69.2	70.7	74.4	70.5
December	53.7	48.4	42.5	45.5	48.2	48.2	48.5	51.8	48.4
Annual									Mean 1980-87
Average	75.8	72.4	68.1	68.1	69.5	68.9	72.2	73.4	71.1
Change in Percentage Point from Previous Year	-3.4	-4.3	0.0	1.4	-0.6	3.3	1.2		

Source: Pannell, Kerr, Forster, Trends in the Hotel Industry, monthly release.

Table A-3. Post-1985 Tentative Hotel Projects in Boston,
Not Under Formal Review, Spring 1989

Location	Number of Rooms
South Station	400
Charlestown Navy Yard	250
Fan Pier	300
World Trade Center	800
Total	1,750

Source: BRA.

Table A-4. Attendance at Major Tourist Attractions in Boston, 1977-1987.

Number of Visitors and Percent Change from Previous Year							
1987	1986	1985	1984	1983	1982	1981	1980
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New England Aquarium	1,224,995	1,128,869	1,123,092	961,772	918,011	862,354	933,076
	8.5	0.5	16.8	4.8	4.0	-5.4	-4.2
Childrens Museum	484,441	481,565	455,804	457,863	391,589	436,872	378,451
	0.6	5.7	-0.4	16.9	-10.4	15.4	-10.2
Gardner Museum	158,973	165,448	140,882	112,748	127,625	146,588	131,062
	-3.9	17.4	25.0	-11.7	-12.9	11.8	-3.9
Museum of Science	1,630,493	987,117	1,190,065	816,154	801,345	810,133	802,681
	63.5	-16.2	45.8	1.8	-1.1	0.9	-10.8
Museum of Fine Arts	874,252	760,657	1,063,583	740,787	817,031	803,150	873,125
	14.9	-28.8	46.3	-19.2	1.5	3.4	95.3
John F. Kennedy Library	263,830	236,461	247,532	268,666	265,708	299,614	381,154
	11.6	-4.5	-8.2	1.5	-11.3	-21.4	-25.9

Source: New England Aquarium, monthly report on museum attendance in Boston.

